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In This Issue

- 24-Bit Painting Techniques
- Amiga Music Utilities
- Deluxe Music 2.0
- Desktop Publishing for Profit

Reviews

- ADI Junior
- MusicLab-IFS
- MicroBotics MBX-1200z
- OctaMED PRO v5.0

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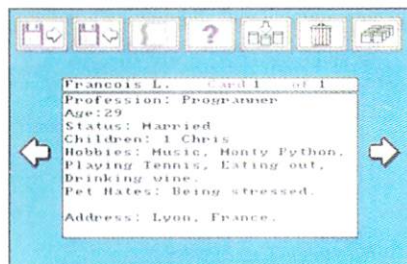
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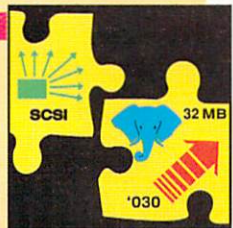
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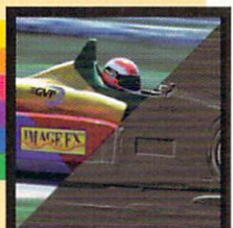
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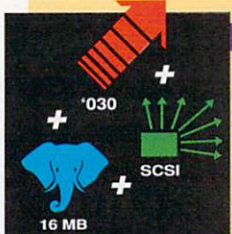


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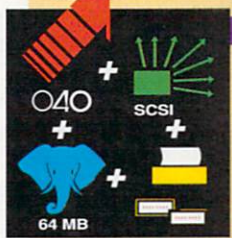
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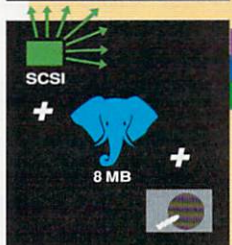
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CONTENTS

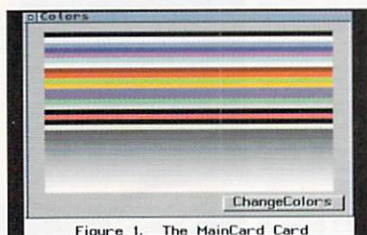
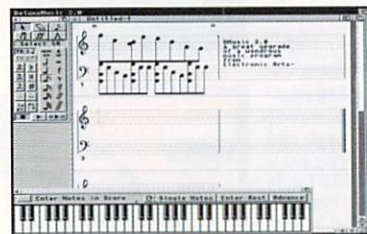


Figure 1. The MainCard Card

CanDo Tutorial, p.38



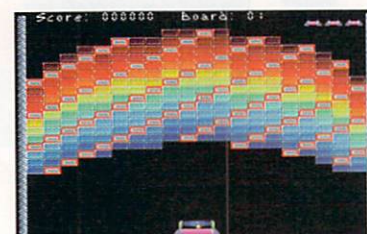
Desktop Publishing, p.52



DeluxeMusic 2.0, p.63



24-bit Painting Techniques, p.55



PD Update, p.30

In This Issue

36 Amigas in Business

by Roger Thompson

A focus on Creative Equipment International and their use of the Amiga.

38 CanDo Tutorial

by Randy Finch

This month, Randy examines SubDecks, Proportional Sliders, and Custom Pointers.

45 Four Music Utilities

by R. Shamms Mortier

Shamms examines four popular Amiga music utilities: *RiffGrabber*, *EmTrax*, *Motzart's Music Master*, and *KeyBang!*.

52 Desktop Publishing for Profit

by Dan Weiss

Resumé design: A simple and profitable way to break into the desktop publishing field.

55 24-bit Painting Techniques

by Mark Hoffman

Mark reviews some basic painting techniques and couples them with more advanced methods to bring new light to 24-bit painting.

63 DeluxeMusic 2.0

by R. Shamms Mortier

Shamms reviews this latest release of the popular DeluxeMusic package.

85 Coming Attractions

by Henning Vahlenkamp

A look ahead at upcoming Amiga games including *JetStrike*, *Fighter Duel Professional 2.0*, *Magic Boy*, and *Seek and Destroy*.

Reviews

13 ADI Junior

by Eric Nixon

A review of this innovative learning environment from Europress Software.

15 MusicLab-IFS

by R. Shamms Mortier

Derive sound from fractal images with this unique music application.

18 MicroBotics MBX-1200z

by Rob Hays

A review of this handy math co-processor and 32-bit RAM add-on card for the A1200.

21 OctaMED Pro v5.0

by R. Shamms Mortier

Play eight separate channels of internal Amiga sound at once with this utility.

Features

24 Online

by Rob Hays

This month Rob takes a look at the Amiga services offered by CompuServe.

30 PD Update

by Henning Vahlenkamp

A look at the hottest shareware, freeware, and public domain software available. This month: *MegaBall 3.0*, *Motorola Invaders*, *NewWorld*, and more!

72 Digital Image Special F/X

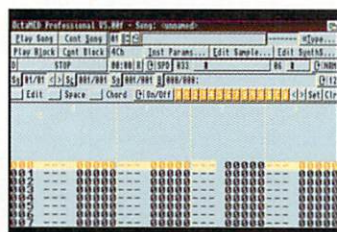
by William Frawley

Add motion blur to your images in ADPro with the help of ARexx.

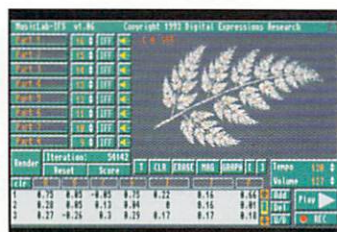
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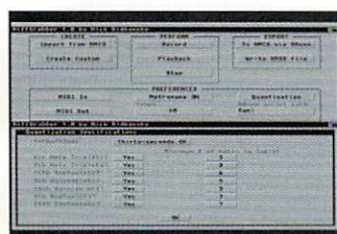
Easy ways to create motion blur effects in ADPro!



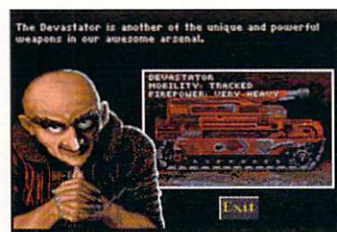
OctaMED Pro v5.0, p.21



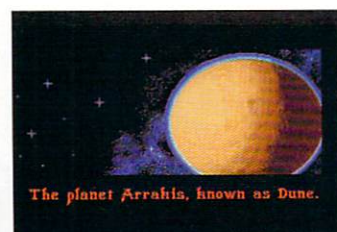
MusicLab IFS, p. 15



Music Utilities, p. 45



Dune II, p.87



Dune II, p.87

Columns

8 New Products & Other Neat Stuff

CD_ADE, Montage Postscript Module, Golden Gate 486SLC2, and LightRave 3.1 are among the neat items in this month's New Products.

26 cli directory

by Keith Cameron

Keith continues the glossary of AmigaDOS terminology.

28 Bug Bytes

by John Steiner

Bug fix for February's Bug Bytes; Co-processor selection on the A4000/30; Expanding CDTV units; A2002 monitor notes; Vortex board workaround.

59 AREXX

by Merrill Callaway

An AREXX program for ADPro to create motion blur in animations.

68 Roomers

by The Bandito

NewTek, LightRave, CD-i, Commodore Shareholder's Movement, 3DO, CD32, and of course, Commodore U.S.A. are on The Bandito's list this month.

81 CD32 Reviews

Featured this month, *Pirates! Gold* from Microprose, *Diggers*, *Fire Force*, and *Lock-n-Load*, a collection of shareware and public domain software.

87 Diversions

This month: *Dune II*, *Body Blows Galactic* from Team 17, *Discovery: In the Steps of Columbus*, and *Alien Breed 2*.

Departments

Editorial6

List of Advertisers80

Feedback34

Fred Fish Index92

And Furthermore96

And furthermore...

A4000 Tower released on the European front at Cebit show.



While no date has been announced for the U.S. release, discover the inside data on CBM's new high end Amiga, page 96.

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Amazing Computing For The Commodore AMIGA™

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1-508-678-4200, 1-800-345-3360, FAX 1-508-675-6002

Amazing Computing For The Commodore Amiga™ (ISSN 1053-4547) is published monthly by PIM Publications, Inc., Carrant Road, P.O. Box 2140, Fall River, MA 02722-2140, Phone 1-508-678-4200, 1-800-345-3360, and FAX 1-508 675-6002.

U.S. subscription rate is \$29.95 for one year. Subscriptions outside the U.S. are as follows: Canada & Mexico \$38.95 (U.S. funds) one year only; Foreign Surface \$49.97. All payments must be in U.S. funds on a U.S. bank. Due to erratic postal changes, all foreign rates are one-year only.

Second-Class Postage paid at Fall River, MA 02722 and additional mailing offices.

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 International Periodical Distributors
 674 Via de la Valle, Ste 204, Solana Beach, CA 92075

&
 Ingram Periodicals Inc.
 1226 Hell Quaker Blvd., La Verne TN 37086

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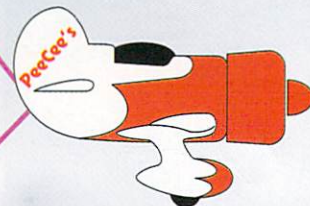
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EDITORIAL CONTENT

Much Ado About Everything

Prelude

I have "lifted" a piece from Shakespeare for the second month in a row (last month I stole from Hamlet). My only excuse is that the current atmosphere from Commodore, its dealers, stockholders, Amiga users, and others sounds more like scenes from a Shakespearean repertory company every day.

Act 1 Scene 1

Sililoquy To A Board of Directors

Jeff Moskow, a U.S. Amiga dealer with Slipped Disk in Madison Heights, Michigan called me shortly after returning from the Commodore Board of Director's meeting held in the Bahamas on March 2. He had heard that there was a lot being rumored about what occurred at the BOD of C and he wanted to make certain that we had the correct information.

I appreciated Jeff's call. By the time he spoke with me, I had heard a dozen different accounts of what had transpired at the meeting. I had been told that the meeting lasted less than ten minutes (almost everyone agreed to this). I had been told that the Board had gone through the meeting with a script (one report said it was so bad that at one point a board member apologized for starting to read another member's part). I had heard that the shareholder's movement group had been able to give a fair and influential presentation and I also heard that the same group was considered ill prepared and emotional.

What I had heard about Jeff was that he had also been emotional and that the board was unmoved. When I told Jeff this, he remarked that that was not how it went, that the board had been receptive, and that they had responded to his points. In order to defend himself against the rumors, Jeff asked if I would like to see a transcript of what he had said at the meeting. I not only agreed, but I told him I would print it.

Jeff Moskow to Commodore Board

"I'm sure there are some in this room who feel that it is a magnanimous gesture when the president of a troubled company 'voluntarily' takes a pay cut from \$1 million to \$750,000. As a dealer who has gone months without any monitors, who has gone months without any Amiga 1200 computers, there are adjectives other than magnanimous that I'd use."

"I'm sure the question many dealers, stockholders, employees past and present have is why, after years of financial disasters, after a marketing program that lacks focus and vision, after the amateurish firing of Mr. Rattigen which took \$10 million of resources which our company desperately needs, why after all this are we left with the same top management?"

"With the changes in boards of directors all across the country, from IBM to GM where we see directors taking an active role in turning around troubled companies, why are we left with what appears to be a 'rubber stamp' board of directors?"

"In closing I have got to confess an undying respect and admiration for General Alexander Haig. Years ago he found himself with a president who was ineffective, who people had lost confidence in and whose decision making was being called into question. Mr. Haig had the courage to convince that President to resign... I only hope that history repeats itself."

Jeff's points are well taken. They are only slightly diminished because the focus of his scorn, the individual in charge of practically all day to day Commodore Business, was not available to attend this less than regular meeting. His presence was urgently needed elsewhere. By the looks of Mr. Moskow's remarks above and those of countless other Amiga owners, dealers, and producers, they were right—his presence has most definitely been requested anywhere than behind the president's desk at Commodore International. My one regret is that we have been unable to get CIL's President, Mehdi Ali, to discuss these problems and possible solutions "on the record."

Act 1 Scene 2

Dilulu's Caldron

While fire and yawns were being exchanged in the Bahamas, the electronic networks in the U.S. were busy brow beating one of CBMU.S.A.'s last executives. The story goes that John Dilulu, CBM's head of marketing (and a whole lot more these days), said some discouraging words about Amiga dealers and Amiga users to a couple of American dealers at the Winter CES this past January. The dealers were more than a little perturbed at the rebuff and made Mr. Dilulu's statements public on the networks. Naturally everyone who read the remarks went ballistic. The wires heated up and basically fried Mr. Dilulu before he had a chance to respond.

In response, Mr. Dilulu, with an assistance from Lew Eggebrecht, will be on CompuServe (according to an inside source) and attempt to straighten out both what he said and what he meant. Whether this will be a live conference or a posting with response to questions, I do not know. What I do find interesting is that this is necessary at all.

In Mr. Dilulu's defense, I don't know whether he said those things to his own dealers or not. Why would the head of marketing ever act that way? Yet, how could the dealers have misunderstood him so completely?

I was also at CES and I can assure you, after four days of constantly defending and promoting the Amiga and CD³², it would be easy to understand if, out of frustration and fatigue, John Dilulu answered a question from a dealer with less than the perfect answer. That is no excuse. We all understand we are judged by the moment and not our entire body of work—which is why our mothers always told us to be on our best behavior. But it is understandable.

It is also understandable for two dealers, upon hearing these words and being at a similar stage of frustration and fatigue, to feel there was no excuse for such behavior and placed the offending words in the public domain. As Jeff Moskow demonstrated above, Amiga dealers also face problems and many of those problems come back to the things Commodore has or has not done to help their business.

Act 1 Scene 3

Questioning

The Commodore Amiga is a very good computer. None of these problems appear to be a question of Amiga quality or the platform's ability. How have we come to the point that loyal Amiga users consistently beat-up on Commodore at every opportunity? I know that there are literally thousands of reasons why these actions occur. The reasons stem from countless injustices that loyal Amiga users and dealers contribute to Commodore. My question is not about the reasons. My question is only why is this so?

Loyal computer fans are never as loyal to the maker of the computer platform as to the computer itself. Apple has disappointed its users many times over with erratic price structures, confused product lines, and an attitude that at one time said Apple II's forever and a year later only sold Macintoshes. If anyone ever wanted to define a Goliath company who had consistently placed its corporate needs above those of its consumers, IBM would be the best case. However, both IBM and Apple have a radical following and superb market acceptance. Why is Commodore so maligned?

The main question is why are Amiga owners so quick to believe the worst? What is special about the assortment of factors which comprise the Amiga market that has made Commodore a target for our scorn? Is it this same scorn that makes Commodore executives feel so embattled? Is it this tension between user and producer that has escalated into a completely ineffectual stream of bitter feelings between the two groups?

We cannot move the Amiga further until we answer these questions. Commodore will not entice new users if old users are vocally disenfranchised. Users cannot get the computer equipment they need and the support they want if Commodore has gone deaf to their requests. We are a marketplace that must work together, but first we must understand why we are so far apart.

End of Act 1

To be continued...

Sincerely,

Don Hicks
Managing Editor

The Best Don't Rest

Facts:

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- More special hardware support (like the DPS PAR and Digital Broadcaster)
- More image formats • More tutorials
- More image processing operators
- And the list just keeps on going

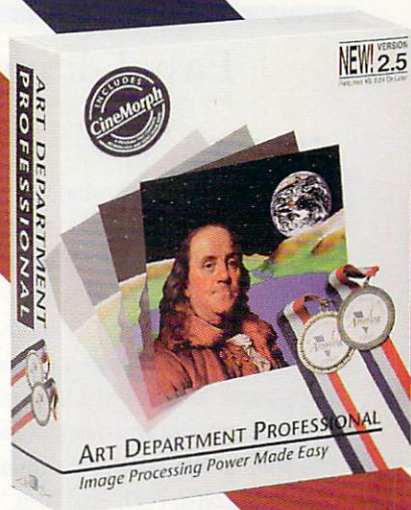
If you're a seasoned professional, ADPro has been listed as a "Must Have" for years. And if you're just starting out, you can't make a safer, more secure choice than the easiest-to-use ADPro ever.

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This screen shows just one of the many ways to configure ADPro's new interface.

Shown are the button interface with floating module lists and render window.



ASDG

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NEW PRODUCTS

and other neat stuff

Family Tree Tracking

Your Family Tree GEDCOM

MVP Software announced *Your Family Tree GEDCOM* (\$25), which works in conjunction with *Your Family Tree v2.0* or later to convert the information to GEDCOM format and vice versa. Use GEDCOM to create either a new database or add to existing data files. Also, convert GEDCOM data to the Tiny Tafel format which is used to summarize the family names you are researching in order to correlate data with others researching the same lines.

MVP Software, P.O. Box 458, Aliquippa, PA 15001,
(412) 378-0411

Inquiry #207

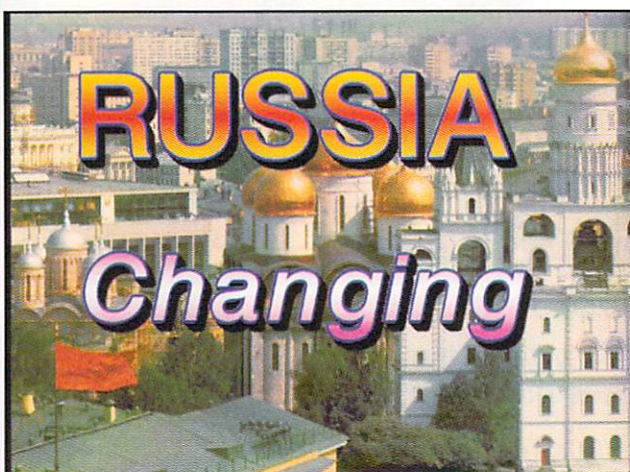
Postscript Character Manipulation

Montage Postscript Module

The *Montage Postscript Module* (\$299.95) allows MT-Toaster and MT-24 Amiga owners to scale Postscript fonts in real time at a 1ns effective resolution. Users can also add all of the special text effects the programs offer to Postscript fonts. It comes complete with ten special Postscript fonts with international characters. Available in NTSC or PAL.

Innovision Technology, 1933 Davis St., Ste 238, San Leandro, CA 94577, (510) 638-0800, Fax (510) 638-6453

Inquiry #209



Picture by R. Shams Mortier

Easy Editing for CanDo Decks

CD_ADE

CD_ADE is a tool allowing *CanDo* authors the ability to edit their decks and sub-decks in their favorite text editor. This tool requires *CanDo 2.0* or higher. By-passing the need to enter an object before being able to edit a script or routine, *CD_ADE* allows the user to work with an entire deck as a text file; create generic INCLUDE libraries of commonly used objects, scripts, and routines; quickly change the order of all the objects in the deck using the cut/copy/paste features of a text editor; globally search and replace variables, objects, or code; and quickly locate segments of code so that you can recall the lines of text but not the object that contains them.

Creative Logic, P.O. Box 743271, Dallas, TX 75374, (214) 432-9824,
Fax (214) 393-0007

Inquiry #208

Synchronicity

XSsync

The *XSsync* is an auto-configuring expansion card which fits internally in the A2000, 3000, or 4000. Fully populated, it includes a vertical interval time code reader, a linear time code reader, and dual serial ports. The serial ports can be hardware configured for RS-232, RS-422, or MIDI. The time code readers on the card, may be used to sync the Amiga with external timecode from video or audio tape sources. The serial ports provide two extra serial channels for the Amiga.

ZEN Computer Services, 2 Silver Birch Grove, Swinton, Manchester, M27 5FZ, UK, +44-61-793-1931

Inquiry #221

CATCH THIS.

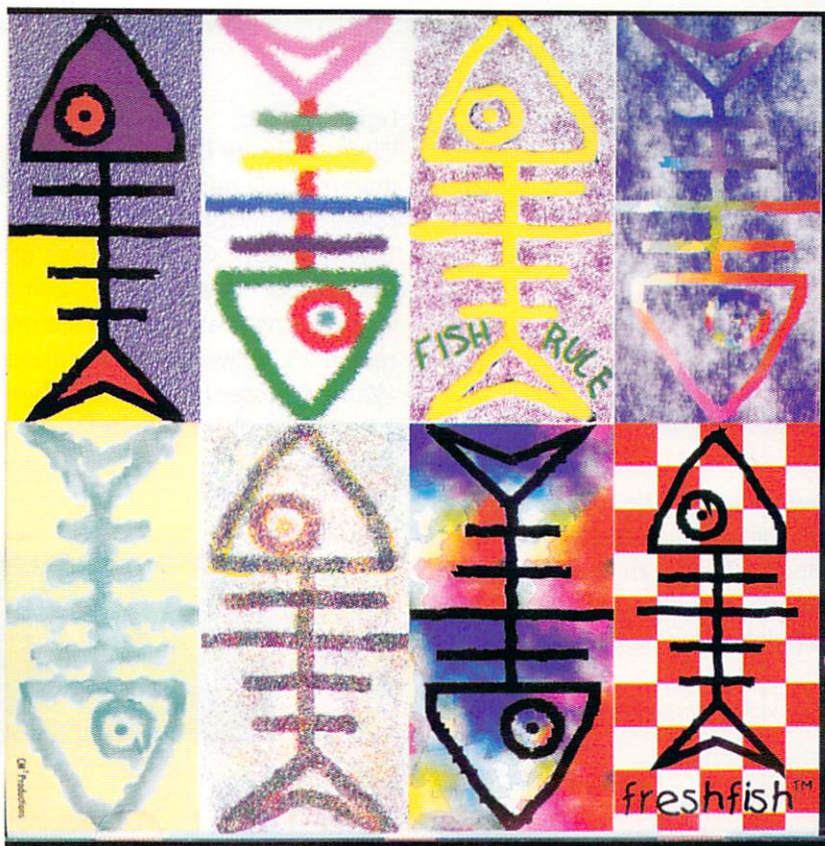
Introducing FreshFish™, a unique CD-ROM series that provides the Amiga community with hundreds of megabytes of the very latest in freely redistributable software.

The FreshFish CD-ROM series is produced directly by Fred Fish, who has been working to supply Amiga users with high-quality, freely redistributable software since the Amiga's introduction in 1985. FreshFish CDs, published every 6 to 8 weeks, contain over 100 Mb of

newly submitted material in both BBS ready (archived) and ready-to-run (unarchived) form. Also included are over 200 Mb of ready-to-run GNU software (EMACS, C/C++ compiler, text processing utilities, etc.) with full source code included, and up to 300 Mb of other useful utilities, games, libraries, documentation and hardware/software reviews.

Two compilation CDs will also be available. The FrozenFish™ series will be published every 4 to 6 months as a compilation of the most recent material from the FreshFish CDs.

GoldFish™, a two disc CD-ROM set, will be available in April 1994. This set will contain the entire 1,000 floppy disk "Fred Fish" library in both BBS ready and unarchived form! FreshFish, FrozenFish, and GoldFish may be purchased by



cash, check (US dollars), Visa, or MasterCard, from Amiga Library Services for \$19.95 each (plus \$3 shipping & handling in the U.S., Canada or Mexico, \$5 elsewhere).

Fax or mail orders and inquiries to:

Amiga Library Services
610 North Alma School Road, Suite 18
Chandler, AZ 85224-3687 USA
FAX: (602) 917-0917

NEW PRODUCTS

and other neat stuff

Faster Processing for PC Side

Golden Gate 486SLC2

The *Golden Gate 486SLC2* (\$999) is built on the same card design as the vortex *Golden GFate 486SLC*. The *Golden Gate 486SLC2* comes with a 50MHz 486SLC2 processor, 2.5MB RAM, floppy disk controller kit, and IDE hard drive interface. The board contains four industry standard 30-pin SIMM sockets and is expandable to 16MB RAM. There is also a socket for an optional 80C387SX-25 math coprocessor. The *Golden Gate* uses the Amiga serial and parallel ports and the Amiga mouse is emulated as a Microsoft serial mouse.

GMR Productions, 3835 Richmond Ave., Ste. 138, Staten Island, NY 10312, (718) 967-1509, Fax (718) 948-0893
Inquiry #210

Multi-lingual Word Processing

Rashumon 2.3

Rashumon 2.3 is a new version of the multi-lingual word processor for the Amiga. This version has full Postscript support including Type-1 multi-lingual fonts. Other new features include a multi-lingual keymapping system, new font manipulation functions, and AGA support.

HarmonySoft, 69 Jabotinsky St, Givatayim 53319, Isreal, Fax +972-3-315-967
Inquiry #211

Network News

TSSnet v2.5

This version of *TSSnet* (\$395) supports SANA-II Ethernet communications. Commodore's SANA-II Network Device Driver Specification provides a standard software interface between networking hardware and software. This allows multiple networks to share the same Ethernet card. Other features of *TSSnet 2.5* include a new manual, mail forwarding, improved node listing in the network Control Program, and improved AmigaDOS 2.0 support.

Thunder Ridge, Inc., N9353 Benson Rd, Brooklyn, NY, 53521, (608) 455-1039, Fax (608) 455-1317
Inquiry #212

☞ Moving Mention...

Design Mirage

Design Mirage, your interactive multimedia specialist has moved. The new address is:

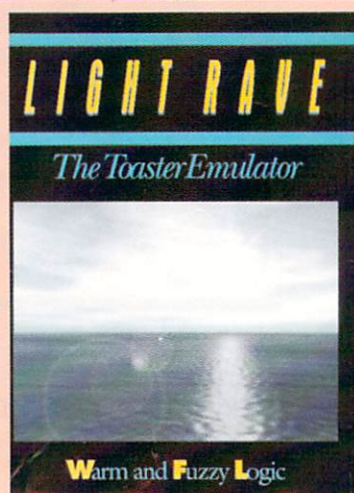
101 North Spring St., Ste. 2200
Bellefonte, PA 16823
(814) 353-9051
Fax (814) 353-9060
Inquiry #213

Ranting & Raving

LightRave 3.1

Warm & Fuzzy Logic announced the latest update to their revolutionary *LightRave* product. *LightRave v3.1* (\$499) is now totally compatible with the 3.1 version of *Lightwave 3D*. Other features of the new release include faster HAM rendering, complete PAL compatibility, easier installation, and custom resolutions. *LightRave* requires *Lightwave 3D 2.0* or later to operate.

Warm & Fuzzy Logic, 2302 Marriot Road, Richmond, VA 23229, (804) 285-4304
Inquiry #214



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Who are we? We are a division of PiM Publications, the publisher of *Amazing Computing for the Commodore AMIGA*. We have a staff that *really* knows the AMIGA as well as the rigid mechanical requirements of printers/publishers. We're a perfect choice for AMIGA DTP imagesetting/pre-press services.

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NEW PRODUCTS

and other neat stuff

Team 17 CD³² Double Packs

Team 17 has released two double packs of games for CD³². *Project X and F17 Challenge* features the classic Amiga shoot-em-up *Project X* and *F17 Challenge* arcade racing game. *Alien Breed Special Edition and Quack* features the space adventure of *Alien Breed* and the cute platform game *Quack*. All games remain more or less unchanged from the original Amiga releases, although they have been adapted to make use of the CD³² gamepad and its buttons. More titles are on the way.

Team 17, Marwood House, Graden St., Wakefield, West Yorkshire, WF1 1DX, UK, 0924-291867

Inquiry #215

Turbo Plus Extension

The *Turbo Plus Extension* is specially designed for *AMOS* and *AMOS Pro*. It attaches to the *AMOS* or *AMOS Professional* system and gives you 130 new high-speed commands. *Turbo Plus* allows the creation and manipulation of maps and levels that are hundreds of screens wide and tall with a minimum of memory. More features include easy use of full color graphic text as well as the ability to move hundreds of stars under interrupt control; manipulate individual bitplanes and bitwise operators; replace zone commands with more flexible fast check commands; and create and manipulate vector objects.

Playfield!, P.O. Box 450884, Sunrise, FL 33345-0884, (305) 846-7969, Fax (305) 846-8338

Inquiry #216

CAD Quarterly Commences

XPress

A quarterly newsletter for Amiga users of all experience levels interested in 2-D and 3-D CAD. Written by professionals using the Amiga, content is primarily focused on *X-CAD Pro* and *X-CAD 3D* with regular feature articles on *DynaCADD*, *Plan 3.0*, and *AutoCAD*. Coverage includes reviews of commercial and PD software, tips and techniques, commentary and graphics topics such as painting, 3-D modelling, and desktop publishing.

Bob Miller-Rhees, 8231 NE Paulanna Lane, Bainbridge Island, WA 98110, (206) 842-6331
Inquiry #217

Major MediaPoint Update

Media Point release 127

Activa announced the release of the latest update to their *MediaPoint* package. This release has a host of improved features including faster dithering of pictures, fast calculation of best color palette, special genlock remapping, importing of DBase files with selectable record fields, improved broadcast limits, and the ability to save pages as IFF files for use in other programs. The player has also been improved so that 24-bit pictures can now be shown on AA machines in 256 colors without remapping them in the page editor.

Activa International, EEMNESSERWEG 51-A, 1251 NB Laren NH, The Netherlands, 31-2153-80-639, Fax 31-2153-80-679

Inquiry #218

Creative Coding

CopyCode 2.0

CopyCode 2.0 (\$25) is a Morse code trainer for the Amiga. Audio frequency, volume, weight, character formation, lesson length, and hide/show text are adjustable by the user. *CopyCode 2.0* contains all the characters on the FCC exam and more. Practice with 14 predefined character groups or create your own groups using the unique on-screen keyboard. *CopyCode* contains thousands of random but repeatable character sequences. Lessons may be recorded and printed.

Sensible Software Solutions, 4951-D Clairmont Square, Ste. 262, San Diego, CA 92117-2798, (619) 453-9446

Inquiry #219

Making Interactive History

Interactive Digital Book on the History of Games

CBP Publications has just released *Geofery Williams' History of Games*, a digital interactive hypertext book. It is marketed as one of the most extensive games histories ever written. It goes beyond traditional publishing by incorporating a powerful graphics based hypertext interface, allowing the reader to click on icons or key words to jump to other subjects, follow hypertext links, or play the game described in the text. The topics covered include board games, card and dice games, arcades, the history of computer games, gambling, and more.

CBP, 1833 Verdugo Vista Drive, Glendale, CA 91208, (818) 240-9845

Inquiry #220

REVIEWS

ADI Junior

by Eric Nixon

Five years ago, when I bought my original Amiga 500, I was hoping my very young children would appreciate the computer's user friendliness, while being stimulated and entertained by the wide variety of programs available. Unfortunately, the number of educational software titles released has been very limited and the quality, generally, not up to the usual Amiga standard. Thankfully, that situation is beginning to change, due to the arrival of many high quality imports from England.

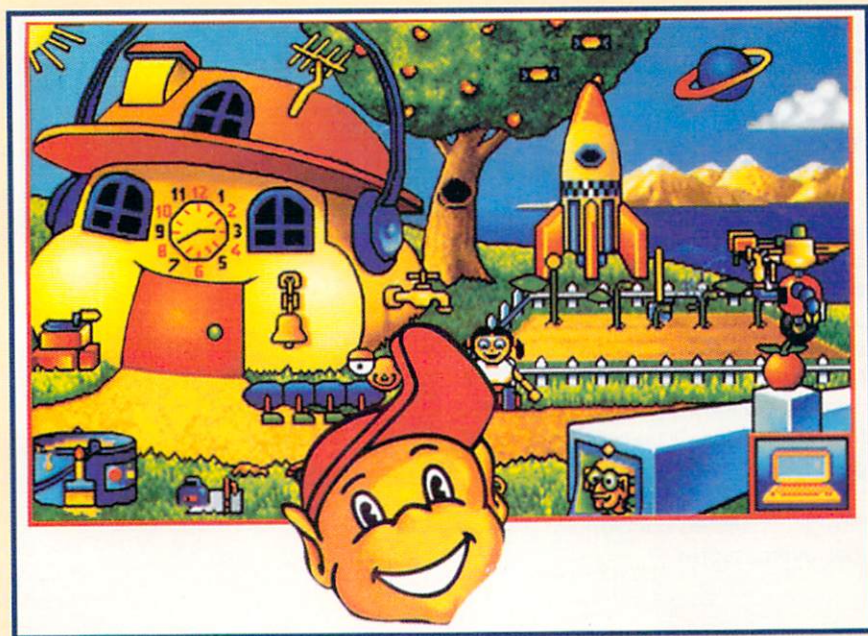
Europress Software has developed into the leading creator of Amiga educational products, starting with the *Fun School* programs and their many offspring, the *ADI* series, and now the *ADI Junior* titles. *ADI Junior* is a modular series built around a central "environment" that allows children as young as four to learn about the computer. The modules subdivide the program into Counting and Reading and age groups Four/Five and Six/Seven; these are each available as separate titles. The

program is compatible with all Amigas, even the A1000, and requires no additional memory.

The main environment is filled with a myriad of activities for your child to try out. They can click on virtually any item on the main screen and discover entertaining animations, including a rocket ship that blasts off, orbits around, and lands, a faucet that turns on in the garden; creates a puddle, and has a little fish jumping in it; and an apple tree with a hungry bird hiding in the leaves.

Whenever the yellow mouse pointer hand turns red, it signals that double clicking the mouse button will lead your child into one of the 10 programs on the environment disk. The variety of these programs is astounding. Your urchins will be introduced to a clock that shows what events are taking place at every hour of the day; a garden where you plant seeds, watch them grow, then pick the flowers; a simple note pad; and a picture construction game where you pick various items and paste them on a choice of landscapes. There is also a painting program, an hilarious portrait game that resembles a computerized Mr. Potato Head, a jigsaw puzzle game, and two non-educational games—one a car racing program and the other a simple Arkanoid clone.

If this sounds like enough to fill a disk, you are wrong. Nearly all of the ten activities include a discovery level, where your kids can get a feel for the



program, and three increasingly difficult levels of learning. This allows children from four to seven to start at the discovery level and progress to the most difficult level at their own speed, while having fun the whole time. As with most of ADI Junior's requesters, picking the correct level is child's play. A box pops up center screen with a clown juggling one, two, or three balls. With minimal first time assistance, your children will master this and all the other requesters in the program.

After many days and weeks of enjoying the environment disk, your children may start to ask, "What else can we play?". This is where the modules come in. On two additional disks you'll find the actual educational parts of the program, where your age four/five or six/seven children can learn counting or reading. Each two disk set contains one age group and one curriculum. This part of the program is accessed by clicking on the school house in the main environment. The computer then prompts you to insert one of the other disks; the disks are clearly labelled and most four year olds, with a little initial instruction, should be able to perform these disk swaps without your help.

After the disk is loaded, a new main screen comes up with 15 more activities specifically related to your child's age and reading or counting requirements. This section is still fun, but is noticeably more structured; your child will be asked to solve real problems and will be rewarded every five levels with a candy. If you quit the program correctly, you'll discover that one of the apples on the tree in the main environment has been replaced with a candy. This is a visible record of your children's progress every time they restart the program; you'll enjoy seeing the smile on their faces and the pride they have in their accomplishments.

Almost Perfect

If I sound like I'm writing an advertisement for ADI Junior, it's because this is a nearly flawless series of programs that will delight any child, while giving them some solid learning. Of course, that's not to say I don't have a few minor quibbles.

Occasionally, you'll run across British words that are foreign to us, lorry, the English word for truck, being the most common. Rather than ignoring them, I like to make these words into a learning experience for my children; I explain that a lorry is what they call a truck in England, which is a country across the ocean.

The game has an almost perfect copy protection scheme for the age group that's using it. There are two little books, one with an elephant on the cover and one with a cat. The child is asked to find the animal on the correct colored page that matches the one on the screen, for example, a lion on the yellow page. Beside the animal is a shape. Match the shape to the correct one on the screen and a little clown jumps for joy. Choose the wrong shape and he sobs uncontrollably. Everything is visual - the animal, the color, and the shape - except for the instructions to tell you whether to choose the elephant or cat book. These are written out as words. A small detail, but it spoils an otherwise perfect copy protection scheme.

After reading the combination PC/Amiga manual, you'll discover the Amiga version is missing a few of the PC features, especially additional sound modules and hard drive installability. The Amiga version does not recognize a second disk drive, so there is more disk swapping than there should be. As well, when you're prompted to insert a new disk, you must wait for a few seconds, then click on the mouse button to get the computer to recognize the new disk.

In order to save your child's results from the learning area, he or she must exit the program correctly. This involves clicking on the little computer screen in the bottom right corner, waiting for the disk prompt, inserting the environment disk, waiting for it to load, then quitting the main environment. The total time is several minutes. This can be a bit of a headache, because when children this age decide they're finished playing, they mean it. You'll be hard-pressed to get them to hang around for an extra five minutes, but if they don't, they'll lose accumulated candies and lower their overall scores.

Copying the Copy

If you have two children using the same program, you might be advised to make an extra copy of your disks. I'm not sure this is strictly legal, but it will save you some teary eyes later on. The program is really set up for one child to use. In our household, my six year old son got to the program first and managed to collect lots of candies on the easiest levels; once a level is completed you don't get any more candies. This left only the more difficult levels for my four year old daughter. Consequently, she has never been able to earn any sweets for herself, a major blow to her young ego. If I'd known this before, I would have had each child work on a separate copy of the program.

These are such minor problems, I feel almost embarrassed mentioning them. Overall, ADI Junior is so thoroughly entertaining and educational.

ADI Junior
Europress Software Limited
Europa House, Adlington Park,
Macclesfield, England
SK10 4NP
0625 859333
Inquiry #222

MusicLab-IFS

R. Shamms Mortier

MusicLab-IFS (MLIFS) from Digital Expressions Research is like *HollyWare's MusicX* with an attitude. It is also loosely related to software from another developer, *PIXound* from Hologramophone, in that they both operate by transforming visual data into audible sound. But MLIFS is radically different from even its closest neighbor in how it does what it does. Digital Expressions Research has another product that I wrote on in an earlier *Amazing* issue: *Video Music Box*. I mention it to point out that one developer can create two products as different from each other as night and day. While *Video Music Box* produces wonderful melodic soundtracks that are universally adaptable to 99% of any commercial soundtracking needs you might have, MLIFS is a tool meant to delight the more experimental computer musician. Not that you can't use it to develop video soundtracks as well. As long as the visuals you are targeting take on some of the same experimental edges.

The MLIFS manual is very thorough and clear, and it's a good thing too. The areas of exploration in sound it offers are phenomenal, and without the quality of its documentation the user would be hard pressed to achieve creative access to the tools.

What MLIFS does

Simply put, this software allows you to import (and even create) various fractal images and then it takes the

same data as an instructional path for sound generation. It works with a maximum of eight "tracks" or "channels" (in the case of MIDI), each of which hold either an 8svx internal Amiga sound sample or address a specific MIDI channel (chosen from 1 to 16). In case you're wondering, you can also address both internal 8svx and MIDI samples at the same time, as long as your samples fit into the eight instrument tracks provided. This is one aspect that again makes me think of *Music-X's* same option, except that *Music-X* allows more than eight channels.

A simple walk through of its operation is in order. The primary building block of MLIFS is an "IFS code". IFS codes can be either fractal or non-fractal. This "code" is a specific type of algorithm, and usually consists of from two to twenty affine transforms. A transform combines a rotation and/or a scaling with a translation. Each of these transformations in MLIFS has seven coefficients, six representing the actual transformation and the seventh the probability of its use. All of the data associated with each transform is editable, and appears on screen in graphic as well as numeric form. There is a more technical explanation of these terms in an appendix in the manual. A thick library of IFS codes resides on the disk.

Selecting an IFS code and loading it into the program is the first step in the process. From there, "Render" is selected on the screen. The shape of the rendered data begins to appear, becoming clearer and clearer as the iterations progress. It is suggested in the manual that you use the data after only a few thousand iterations, and shut rendering down at that time. I have, however, allowed the process to continue to about 100,000 iterations, providing more data so that the resulting composition was thicker (more sound). A minimalist might do the opposite.

Next, one selects the "Score" button. The data that appears by default in one color (yellow) on the graphic screen now is translated into a multicolored "score". This score can be played by simply clicking the mouse. It loops until stopped. The score created can also be saved for later retrieval and play. You can layer as many IFS codes over each other as desired, even modifying areas of some of them in the process (magnification creates blockier and slower sounds). When you are satisfied with a score, it can be translated into a "sequence", and saved out as a standard MIDI or SMUS file. Figure two demonstrates what an MLIFS score looks like when saved out as a MIDI file and imported into *DMusic 2.0*. Most serious Amiga music applications allow you to import MIDI files, and some address the SMUS configuration as well. This means that the results achieved in MLIFS can be ported to 99% of other Amiga music packages without a glitch.

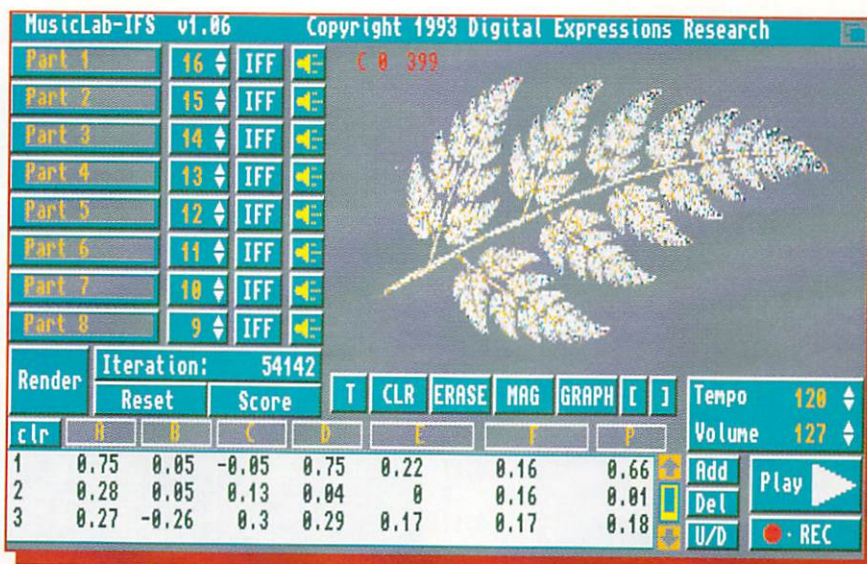


Figure 1. The visual here, originating from a MLIFS IFS code called "Fern", is transformed into instructional data that MLIFS uses to form the basis of a playable musical score.

Optional Tweaking

If all you could do was to create scores by following the simple method above, MLIFS would be a bargain. But the tale is deeper yet. This software is loaded with options that allow you to finely hone your composition in a variety of ways. Let's look at some of them.

First, as hinted at earlier, you can alter the imported IFS codes in two ways: by reworking the numerical data and by altering the graphical structure. The first operation is easily accomplished by simply typing new numbers into the seven associated string boxes. The second operation is not as obvious. The graphical data is contained in the codes skeletal underpinning, associated triangular structures with moveable control points, automatically creating new coded data. There is a quick render feature which allows you to preview the new structure.

MLIFS allows you to define and use scalar PreSets in your musical creations. By bringing up a PreSet menu, you can scroll through a list of choices for up to 32. Choice 0 cannot be edited or changed. It is a chromatic scale, and with most IFS coded scores, produces the most cacophonous results. Other choices abound in the list, however, like pentatonic, whole tone, diminished, dominant, and modal scales. These shape your creations into more pleasing sound structures. You can apply these presets in real time while your composi-

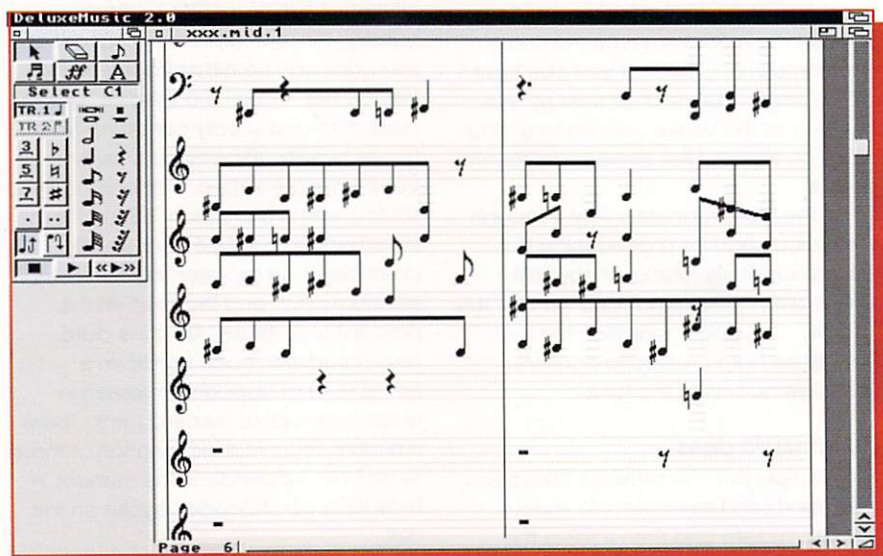
tion is playing by accessing the "Apply PreSet" window. This allows you to alter the "Root" of any scale (from C to B) and also to choose from any of the PreSets in an instant. The sounds change accordingly. This is especially effective when using a MIDI module.

Another alteration MLIFS allows is the editing of the scores Orchestration Parameters. Here you can cause each of the eight parts to generate from 0 to 4 voices, while setting the high and low notes sounded by each instrumental channel (B9 to C0). The "Resolution" of a score indicates what the notated value of a sequence will be, from whole notes to various triplets to sixteenths. A "Parameters" menu allows the alteration of transposition options for each of the eight tracks, MIDI patch (sample) numbers, prioritization levels, and left/right Pans for stereo systems.

A separate "Filter Definitions" window allows you to create your own scalar patterns, though I must confess that the on-board library of patterns already is chock full of most of the ones you will need. By indicating your one octave scale with an on-screen keyboard, you can create all of the Western scales necessary.

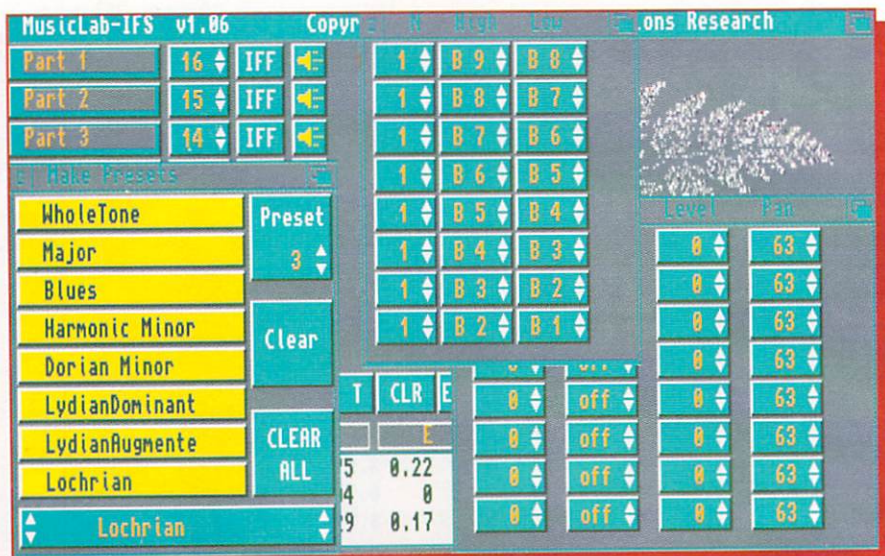
The Note Editor

It's not necessary to export your compositions in order to do some major tweaking—MLIFS has its own Note Editor. Here you can set the time signature, insert parts, adjust octave parameters, and preview-play the results.



Above right: Figure 2. Here we see the "Fern" score after it was saved out as a sequenced MIDI file and imported into DMusic 2.0. From here, it can obviously be tweaked further and saved out again for performance or recording.

Right: Figure 3. MLIFS has a wealth of options that allow you to reconfigure the output before a score is either played or saved. For MIDI users, MLIFS allows the adjustment and alteration of samples and MIDI channels, as well as diverse orchestration and the manipulation of parameter limiting.



The One-Stop-Music-Shop

Blue Ribbon SoundWorks' *One-Stop-Music-Shop*, a fine synth engine on a card, is fast becoming an accepted standard for Amiga musicians. It couldn't be easier to address from within MLIFS. Just go to the OSMS directory and click on the "Loop Back" option, making sure you have a serial cable connected to your MIDI box from the computer. Voila! MLIFS addresses all the OSMS MIDI samples!

Suggestions

The first is to enlarge the instrument tracks to sixteen, the standard MIDI limit. This would allow thicker layering of samples, and more variable tracks. Secondly, an addendum to the manual to provide a more in-depth tutorial on what actually happens when an IFS code is edited, either graphically or numerically (though a reference is made in the manual to suggested further readings). This would allow users to develop a better understanding of how certain editing principles effect the coded outcome. I imagine this information would be rather deep and limited to those users who are attracted to experimenting in this area, but it might also invite the accumulation of knowledge by those unaware of the bridge between math and visualization, and would be a terrific tool for learning in the classroom as well. Third, make the IFS skeletal triangles splined sources, so that unique curved surfaces would result. Perhaps the math involved would be too complex for the Amiga to handle, but what a possibility for experimentation!

Conclusions

Anyone who likes to experiment with music creation on the Amiga, from the novice to the professional, would find this software useful. I think you'll find it all the more valuable if you have a MIDI synth connected, but it also has the capacity to do some very interesting things with on-board 8svx samples. It is not copy protected, and will work with WB 1.3 and beyond, requiring only 1MB RAM in the process. The manual that accompanies it is a terrific aid in the

learning and creative process. Digital Expressions Research is working on an upgrade that should be available by mid-Spring or before. Nice stuff!

MusicLab-IFS
Digital Expressions Research
W6400 Firelane 8
Menasha, WI 54952
(414) 733-6863
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Comments?

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MicroBotics MBX-1200z

Rob Hays

The Amiga 1200 is a great computer right out of the box, including the Advanced Graphic Architecture chipset, a 68EC020 CPU running at 14.3 MHz, two megabytes of Chip RAM, an industry standard PCMCIA slot, and IDE hard drive interface built in. However, it is a fact of life dictated by the Amiga's hardware, that programs operate slower when forced to use Chip RAM exclusively. This is because the custom coprocessors will interrupt the main processor when they need to manipulate graphic or sound data that must be stored in Chip RAM. The solution to this problem is to add

what is known as Fast RAM to the system. In fact, it is called "Fast" RAM because the CPU doesn't have to wait for the coprocessors in order to use it.

With the Amiga 1200 there are two ways to add Fast RAM to the system: the PCMCIA slot, and the expansion connector located in the so-called "belly slot" on the bottom of the computer. Adding RAM via the PCMCIA doesn't increase the performance of the system, and may actually slow it further. This is because RAM added here is only 16 bits wide, and since the 68EC020 is a 32-bit processor, it has to access the RAM twice for every

operation. Ram added to the internal slot can be 32 bits wide, and thus impose no performance penalty to the system.

Since the release of the Amiga 1200, there have been many different products released to take advantage of this internal slot and enhance the computer. These range all the way from boards that add only a battery backed clock, to boards that include 68040 processors, RAM, and SCSI interfaces. The one I chose falls midway between these extremes in both price and features.

The MicroBotics MBX1200z includes a real time clock, 32-bit RAM, and a math coprocessor. The clock is used by the system for date-time stamps

Table 1

Test	Base	FPU	32 bit	Ram & FPU
EmuTest	2.56	2.56	5.07	5.07
WritePixel	3720.10	3720.11	5520.84	5520.80
Sieve	15.29	15.29	12.67	12.67
Dhrystone	3267.51	3267.55	5917.32	5917.31
Sort	22.10	22.10	15.39	15.39
Ellipse	13.02	13.02	9.56	9.56
Matrix	6.48	6.48	4.04	4.40
IMath	11.05	11.05	8.94	8.94
MemTest	3.30	3.30	7.25	7.25
TGTest	1065.28	1065.27	1282.90	1282.94
LineTest	1295.10	1295.16	1382.51	1382.43
Savage	332.24	5.99	190.27	5.98
FMATH	41.87	6.92	21.78	6.85
FMatrix	13.78	10.56	8.18	8.74
BeachBall	305.51	35.77	176.28	30.38
InstTest	809,143.89	809,142.52	1,647,441.88	1,647,440.30
Flops	0.0135	0.1859	0.0235	0.1941
TranTest	427.11	22.20	241.41	14.54
FTrace	230.22	8.82	132.54	8.10
CplxTest	20.79	14.09	11.50	9.40

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Hey, have I mentioned lately that the Amiga Rules?

on files, and also by any program that displays the time or date on screen, such as Commodore's Clock program provided with Workbench. A standard lithium watch battery maintains the time and date when your system is turned off, and should last three to five years. Replacing it is a simple matter of sliding the old battery out and the new one in. These batteries currently sell for less than five dollars.

The MBX1200z supports the Motorola coprocessors, also known as Floating Point Units, or FPU's, because of the type of math they are designed to perform. A 14.3 MHz 68881 math chip is standard with the board, and 25 or 50 MHz 68882 chips are optional. These chips will speed up most math-intensive programs tremendously. If creating ray-traced scenes is your favorite computer past time, you definitely need a math coprocessor.

32-bit RAM is added to the board via a SIMM socket. SIMM stands for Single Inline Memory Module, and has become a standard way of adding RAM to many computer systems. Each SIMM is a separate printed circuit board containing RAM chips and support components. There are many different types of SIMMs available, so if you plan to supply a SIMM yourself for the MBX1200z, be certain to obtain the proper type. This board uses the same type of SIMM as the Amiga 4000, a 72-pin SIMM organized as 1, 2, 4, or 8

megabytes by 32 bits. Since the board has only one socket, be sure you know how much 32-bit RAM you will need before buying.

The documentation included with the board consists of a single, double-sided sheet. This may sound skimpy, but it adequately covers installation of the board and SIMM, setting the four jumpers to configure the board, and a troubleshooting section. A floppy disk is also included with memory testing software.

Installation of the board normally consists of removing the hatch cover on the bottom of the Amiga 1200, lining up the connectors, and pushing the board home. For some reason, however, I was unable to install the board in my computer this way. After many attempts, I finally removed the case as if I were installing a hard drive. With this done, I could see that the metal shield over the motherboard extended far enough into the expansion compartment that it interfered with the MBX1200z. The solution involved loosening the screws holding the shield and raising it up enough to allow the connectors to meet. The entire process took only a few minutes, much less than I had spent trying to install the board normally. This appears to be a rare problem, as I have heard no other reports of problems installing this particular board. Be warned that opening the case may void any remaining warranty on your computer, unless done by an authorized service person.

Once installed, the design of the MBX1200z places the components and jumpers toward the outside of the computer. This makes it a simple matter to add or change SIMMs, or change the configuration jumpers with the board remaining installed in the computer.

OK, how much of a difference does 32-bit Fast RAM or a FPU chip really make? To find out, I used version 6.5 of LaMonte Koops' excellent program, *Amiga Intuition Based Benchmarks*. AIBB includes 20 tests to evaluate system performance on the CPU and chip level. Input/output and disk operations are not tested. What follows is a list of the tests performed, and what form the results are reported in.

Tests such as these are mainly useful in making comparisons between systems, rather than as absolute indicators of system performance. All of the tests were conducted on the same Amiga 1200, with the only difference being the addition of the MBX1200z board. Configuration jumpers were set to enable or disable the 32-bit RAM, and AIBB used 69020 compatible instructions. I ran the test series four times. First with the standard system, next with the utilization of the FPU, but no RAM. The third test run utilized the 32-bit RAM but not the FPU, and finally with both the RAM and FPU enabled. Table 1 contains the results. When broken down this way, it is easy to see which operations benefitted from the 32-bit RAM, and which benefit from the FPU.

In the following tests, a higher number indicates better performance, in all other tests, a lower number indicates better performance: EMUTest, WritePixel, Drystone MemTest, TGTest, LineTest, InstTest, and Flops. MicroBotics has been supplying peripherals for the Amiga since the original Amiga 1000 was released, and has always had a reputation for quality products. When I called the supplied tech support phone number, a recording advised that the MicroBotic product line had been purchased by a company named Paravision. The recording went on to say that technical and support personnel from MicroBotics had been hired by Paravision. When I called the new phone number, I received fast, courteous answers to my questions.

Unless you really need a much more powerful CPU, or the flexibility of a SCSI interface, the MBX1200z is an excellent choice. It provides the Amiga 1200 with a significant performance boost at a modest price.

Correction

In the April 1994 issue of *Amazing Computing*, AC 9.4, we listed an incorrect address for Interactive Video Systems in the MovieMaker review. The correct address is:

IVS
14804 Beach Blvd.
LaMirada, CA 90638
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Fax (714) 228-0348
BBS (714) 537-2751

MicroBotics
1251 American Parkway
Richardson, TX 75081
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Inquiry #224

OctaMED Pro v5.0

R. Shamms Mortier

OctaMED is the rave music program in Europe, and has been for quite some time. As an Amiga musician and soundtrack designer, I can tell you that OctaMED's reputation as deep music software is based upon options, uniqueness, and application possibilities. One reason that it is not as well known in North America as in Europe has to do with packaging. OctaMED boasts no packaging, and even the documentation has to be ordered separately. This is from the days when it started out as a shareware item, and old habits are not broken easily. Not that it lacks documentation altogether. The software comes with AmigaGuide help files. If you're like me, you can even take the time to clean them up (take out the unnecessary code calls) and print them out.

What makes OctaMED different?

The "Octa" in its title refers to the fact that OctaMED can play eight (not four) separate channels of internal Amiga sounds at once. It is much more geared as an Amiga internal sampled sound player than as a MIDI accessory, though it has MIDI capabilities too. There is some loss in the quality of the sounds when eight are targeted at the

same time, but not enough to interfere with most applications. The additional sounds (from 5-8) are sounded by mixing each with channels 1-4, and then sounding two in unison...a novel approach to expanding the limited Amiga 4 channel capacity. But this is not the extent of OctaMED's altered Amiga personality.

OctaMED targets 8svx samples in a way that makes it as much a sample editor as a composition tool or sequencer. You could purchase it for its sample editing alone, saving out edited samples for other Amiga music programs to load and use. You can record samples with it as well, just as you can in other dedicated Amiga sampling software. Any OctaMED song can have up to 64 samples it calls upon. All of these samples are stored in a list and are instantly brought up by an assigned macro key (01...0A...10...1A...). To this end there is a Sample Editor screen (see Figure 3) that shows the graphic of any sample, allowing you to reverse selected ranges as well as to perform all of the standard cut/copy/paste editing desired. I loaded in samples from a variety of sources, and was able to edit them and save the new versions without any problems. The display can show the

waveform as "lines" or "pixels" (akin to airbrushed dots). If Pixels are chosen, then you can set the density in a range from 0 to 50. You can freehand draw into the waveform with either lines or pixels to alter the sound. One of my favorite features is the numeric sample tuner, allowing you to set an A-440 tone with no sweat.

Many of the Sample Editor's commands are nested in the menus, though a full selection of keyboard equivalents are listed for every OctaMED choice. Through use of menu commands, you can add echoes to the waveform. You can change the volume, pitch, and the mix between the sample and another waveform placed in the buffer. You can also perform operations I haven't seen on other sample editors like boosting the filter, adding "noise" (making a sample sound grittier or for creating drum sounds), and creating full four-voiced chords from the sample.

Four ways to sample

OctaMED allows you four separate sample qualities to address: Samples, External Samples, Synthetic Samples, and Hybrids. "Samples" are the normal Amiga 8svx variety, but the developer promises to implement 16-bit samples as soon as Commodore releases 16-bit audio cards as a standard. "External Samples" are like normal Amiga 8svx samples except that another two octaves are added at the bottom of the range. "Synthetic Samples" are very interesting alternatives in this software, as they are quite easy to create and take very little storage space when saved out. They are developed by altering sample waveforms (you can free-draw into the waveform, for

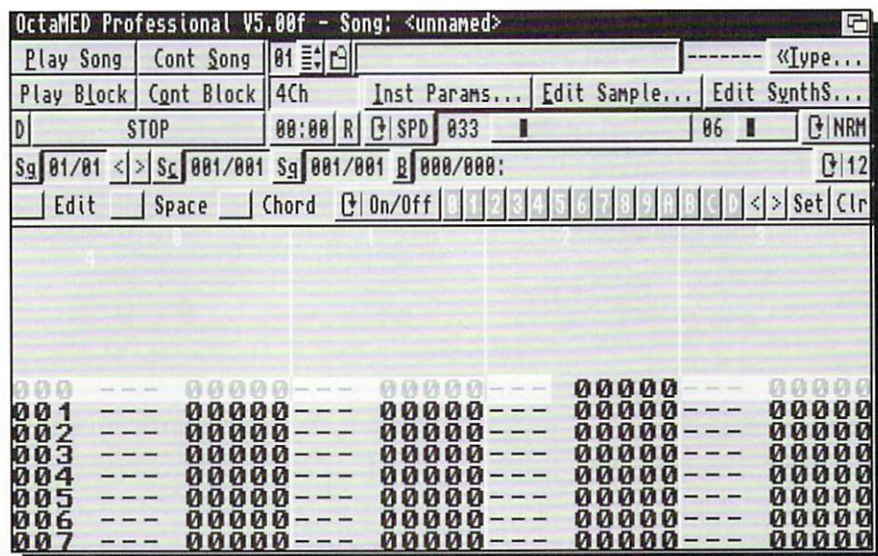
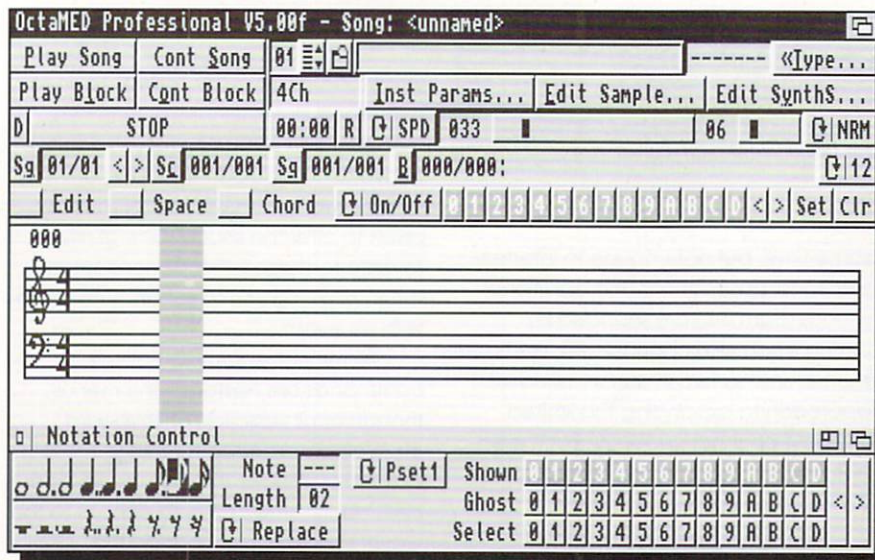


Figure 1. OctaMED's "Tracker Editor" displays notation in data form, allowing finer control over the parameters.



example, or mix waveforms together). Synthetic Samples sound like what they are, robotic synthesizer tones. Up to 64 waveforms can be defined for one SynthSound. "Hybrid" sounds are ordinary samples treated with most of the SynthSounds editing tools, and they produce a unique blend of audio worlds.

OctaMIDI

OctaMED allows 1,048,560 bytes in MIDI messages, more than enough for most uses. There is no info in the documentation on how to set up to address the *One-Stop-Music-Shop* (OSMS), but it isn't that hard to figure out. First, go to the MIDI menu in OctaMED and turn MIDI on. Then switch the "Loop Back" function of OSMS on in your *Bars & Pipes* directory (or wherever else you've stored the Loop Back module). Then go to the Instrument Parameters requester that is accessed from the main OctaMED screen. There you will find both a MIDI channel slider (listed as 0 to 16, with 0 being "off") and under which you'll find a "Preset" slider.

Presets are the actual voices of OSMS (1 to 128, with 0 being "none"). Then you can play your OctaMED song through the One-Stop-Music-Shop synth! If you want to have some percussion fun with your OSMS, put the MIDI channel on "10", turn on "extended Presets" (0 to 2800), and set the PreSet at 1841 (set "Transpose" to 24/6). The Presets over 128 on the OSMS are keyboard splits, and PreSet 1841 is a split between a steel drum and percussion sounds, allowing you to literally play a Caribbean suite from the Amiga keyboard.

OctaMED Song Creation

Creating songs in OctaMED is a building block process. OctaMED uses "tracks" (up to 64 and not limited to

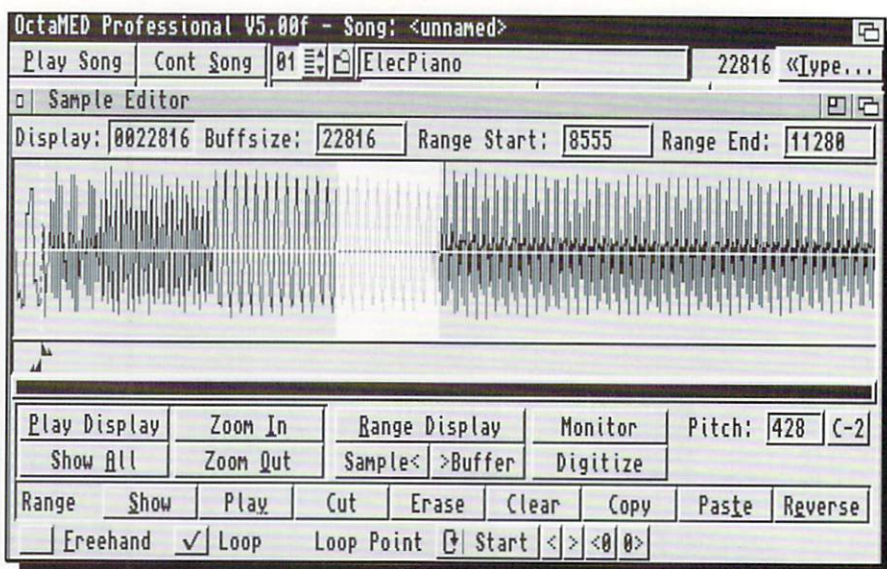
multiples of 4) to build "blocks" and "blocks" (up to 1000) to create "songs". There may be up to 999 entries in any playing sequence. You can choose to save songs out as compressed files, something no other software offers at this time (OctaMED uses a PowerPacker library to do this). Song creation in OctaMED is by far the most complex process, and points out a need for much clearer guidance.

Conclusions

In other Amiga music software samples are the secondary aspect of what is created. Not so in OctaMED. The sounds, it seems, are primary, and the sounds determine the "blocks" or sections of a sequence (song). For this reason, OctaMED does not load in either MIDI, SMUS, or any other alien song-file format. Loading in a DMusic song, for instance, leads to unexpected results. OctaMED is a universe unto itself as far as other compositions go. It is obvious from the lack of a full selection of notation units (no triplets or anything smaller than sixteenth notes) that the standard compositional aspect of OctaMED as compared to other Amiga software is lacking. On the positive side, however, is the capacity of this software to create some extremely interesting sequences, as long as you mean to play and record them while the software is

Top: Figure 2. The OctaMED "Notation Editor" uses a traditional staff display for notation.

Right: Figure 3. The "Sample Editor" gives you complete control over the editing of imported samples.



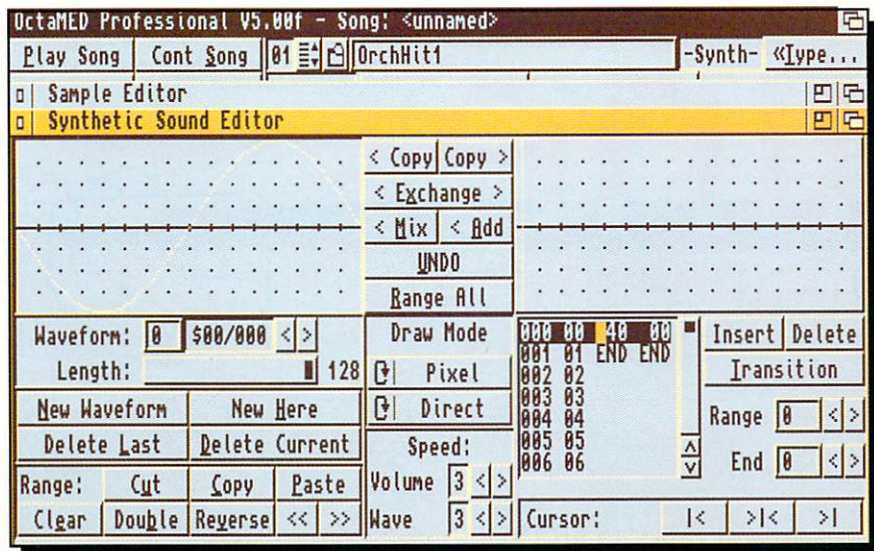


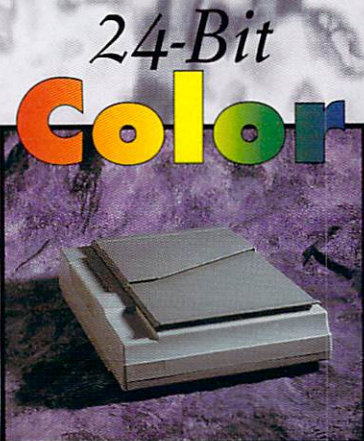
Figure 4. The "Synthetic Sounds Editor" allows you to create instrument sounds from basic waveform editing.

up and running. The Amiga keyboard also can be used as a sample player as it is fully mapped as would be an attached keyboard. You can actually play and record a melody while at your Amiga (shades of Aegis' SONIX). This is good news for users who insert sounds to videotape.

Though you can start your learning curve by referring to the AmigaGuide or by printing out the docs, this software is way too complex to learn by those methods alone. I would advise ordering the legitimate documentation immediately after you get this software. I might even suggest that the real-deal docs be included by the developer—this is the professional thing to do (guided tutorials are an absolute must-have here!). The notation alternatives have to be seriously expanded, and the sooner the better. There should be Save alternatives that address at least the MIDI file format if not SMUS, and perhaps Load options as well. Developers have every right to expect users to spend time learning from experimentation, but users have a right to expect dedicated tutorial help along the way in order that professional results can be achieved. After all, any serious user has more than

one software package to master, and each demands time and energy. As for the Hard-disk installation procedure, it should make use of the standardized Commodore process, which among other things adds items to your user-startup sequence automatically. This is good software that can be great in time with a little more attention to clarity, user documentation (tutorials!), and more handshaking with peer products. Without some attention to these fixes, this software will never reach its potential on this side of the ocean, except for a small dedicated audience of experimentalists with more time to spend than most of us. I look forward to reviewing OctaMED 6.0.

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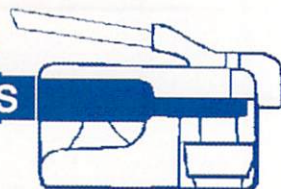
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by Rob Hays

amiga telecommunications



If you were to stop ten people at random and ask them to name an online service, chances are most, if not all, would come up with the name CompuServe. The reason for this familiarity is the fact that CompuServe is the largest online service around. Since being acquired in 1980 by tax preparation firm H&R Block, CompuServe Incorporated has been busily expanding its holdings, and now consists of several different companies. The component we deal with online is known as CompuServe Information Service, or CIS for short. This month we'll be looking around the Amiga section of this giant.

Like GEnie and most other services, CIS provides a menu-based interface to its users. If you use an IBM compatible or Macintosh, there are several graphical interface programs available from CompuServe, but Autopilot is the only graphical option for the Amiga. See the February Online for a description of AutoPilot. To find the Amiga section from the opening menu, choose 11 for Computers/Technology, then choose 2 for Hardware Forums, then choose 13 for the Commodore and Amiga Forum. Or from any CompuServe prompt, type GO AMIGA.

The Amiga section is divided into four Forums: Amiga Arts, Amiga Tech, Amiga Users, and Amiga Vendor. Each Forum contains its own message, file library, and conference sections. One of the major differences between CIS and GEnie is the way the message base is organized. On GEnie the messages are sequential by date and time of their posting. CIS organizes the messages by their threads. What this means is that when you pick a topic of messages to read, you read through the original message and then all replies to it, as well as replies to any of the replies, in the order in

which they were posted. This has the advantage of allowing you to follow the topic through to its conclusion before moving on to another.

Right: At CompuServe's main menu, type GO AMIGA to access the Amiga forums.

Left: What sort of topics do the individual Forums contain? Amiga Arts is the place to go for everything of a graphical nature. The AmigaTech Forum includes topics concerning programming, system software, and authoring systems. AmigaUser is the Forum devoted to user applications.

```
20:50 EST Monday 14-Feb-94
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GO RATES for lower Standard Pricing info

CompuServeTOP
1 Access Basic Services
2 Member Assistance (FREE)
3 Communications/Bulletin Bds.
4 News/Weather/Sports
5 Travel
6 The Electronic MALL/Shopping
7 Money Matters/Markets
8 Entertainment/Games
9 Hobbies/Lifestyles/Education
10 Reference
11 Computers/Technology
12 Business/Other Interests
Enter choice !go amiga
```


What sort of topics do the individual Forums contain? Amiga Arts is the place to go for everything of a graphical nature. As of February, topics include Drawing and Painting, Desktop Video, Music and MIDI, Rendering, Animation, and Multimedia. The AmigaTech Forum includes topics concerning General Programming, C Programming, Assembly Programming, ARexx, System Software, Authoring Systems, 2.0 Programming, and Amiga UNIX. AmigaUser is the Forum devoted to user applications. It includes the topics, Communications, Word Processing/DTP, Personal Applications, Business Applications, Using 2.0 - 3.0, Amiga Amateur Radio, Amiga Hardware, Bridgeboard/AMAX, CDTV, and International Amiga. AmigaVendor is the spot for company support topics. Companies represented are Central Coast, ASDG, NewTek, Impulse, New Horizons, Black Belt Systems, Syndesis, INOVAtronics, AutoPilot, GVP, DKB Software, Softwood, Oxxi/Precision, Right Answers, Soft-Logik, MicroBotics, and Utilities Unlimited. If you are having trouble with products from any of these companies, this is where you can get answers straight from the horses' mouth.

One other area included in the Amiga section of CIS is the Amiga File Finder. While files can be searched for within each individual Forum by keyword and age, searches can take a while if you don't know in which of the forums the file is located. The File Finder is a specialized database of the most popular files in all of the Forum libraries. While File Finder's lists may be a few weeks old, (for instance, on February 13, files were current as of January 19), it provides a much more flexible way to find specific files. You can search by topic, file submission date, Forum name, file type, file extension, file name, or submitter's user ID number.

Speaking of files, CompuServe follows the more restrictive naming conventions imposed by MS-DOS. This limits file names to a maximum of eight characters followed by a period and three more characters. This extension usually refers to the compression program needed to expand the file to its full size. These limitations

make the File Finder the preferred way to locate a particular file. Of course if you are looking for a new file, you may have to search the individual libraries.

CIS has a reputation of being overpriced. I have even seen it abbreviated as CIS\$. Considering the breadth of services available, it is not that far out of line, and the rates dropped as of February 6, making it even more affordable. There are several different pricing plans, but the standard is as follows: The monthly membership fee is \$8.95. Connect time is billed in one minute increments, and when using CompuServe's own communication network during evenings, weekends, and holidays, baud rates of 300 through 2400 are \$4.80 per hour, and 9600 through 14,400 are \$9.60 per hour.

To find the nearest local access phone number for your area, set your communications software to seven bits, even parity, and one stop bit. Have your modem dial 1-800-346-3247. This will connect you to a database that will search for CompuServe access numbers. When you find your local number, you can call using a demonstration account which will let you see what the service is like. When your modem connects, press return. At the "Host Name" prompt, type CIS, and press return. When prompted for your user number, type 77770,101, press return, and for the password, type FREE-DEMO, and another return.

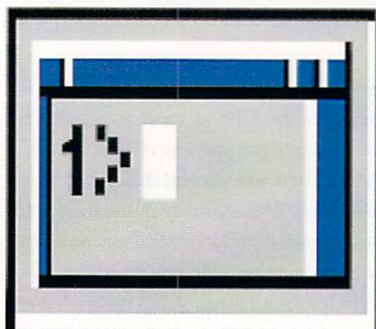
That's all for now. Have fun exploring, and see you online! Remember, I can be found on CompuServe as 72764,2066, and on GENie as R.Hays5.

•AC•

Please Write to:
Rob Hays
c/o Amazing Computing
P.O. Box 2140
Fall River, MA 02722-2140

```
Commodore/Amiga ForumsCBMNET
Amiga Forums
1 Amiga Arts Forum +
2 Amiga Tech Forum +
3 Amiga User's Forum +
4 Amiga Vendor Forum +
5 Amiga File Finder +

Commodore Forums
6 Commodore Arts and Games +
7 Commodore Applications Forum +
8 Commodore Service Forum +
9 Commodore Newsletter +
Enter choice !!
You have left basic services
Computing SupportAMIGAARTS
```

cli by Keith Cameron directory

AmigaDOS Glossary Part II

As you may recall, last month I began a glossary of terms related to AmigaDOS and the Shell. This month I will continue that glossary, beginning with the letter 'D'.

Many screens, including the Shell, have a **depth gadget** in the upper right corner. The depth gadget looks like two boxes, one filled in and overlapping the other. By clicking upon the depth gadget, you can move the screen from front to back or vice versa. Such a gadget is vital for multitasking.

Sometimes in the course of executing AmigaDOS commands, you send information from a source to a **destination**. The destination can be a file or a directory. It receives the information sent. A good example of this is the COPY command, when you copy one file from one directory to a destination directory.

A **directory** is common to all computer systems. It is a location for storing data, such as files and other directories. These files can be anything from script files to word processing files to computer programs to anything else. From the command line, most systems use the word directory to refer to this feature. However, other terms may be used from a more "user-friendly" environment. From the Workbench, for example, such a storage device is referred to as a "drawer." I believe they are called folders on the Macintosh. And on the File Manager on MS-DOS Windows, they are called directories but resemble file folders in icon appearance. A compromise, I suppose. From my experience, I do not believe that people use directories to their full benefit. Imagine a filing cabinet. You would have several drawers in a filing cabinet, and each drawer would probably contain numerous file folders. Every time you filed a paper, you would probably put it into a specific file rather than simply toss it into any of the several drawers. Yet, on a computer, people do not seem to "file" documents into specific folders (directories).

Most people know what a **disk** is. However, as a novice I remember being confused by the term **hard disk**. I had only experience with the old Apples at the time, and all of them used the old 5.25 disks. A few years later, still knowing very little about computers, I encountered my first Mac and the 3.5 diskettes. These were harder than the 5.25 floppies, so I assumed they were the "hard" disks, which I was just beginning to hear about. (You can stop laughing now; I never claimed to be the brightest guy around.) I then learned that the hard disk is located inside the computer. Today, there are various disks. Some are double-sided and double-density; others may be double-sided and high density. The high density diskettes can store more information. There are now compact disks as well. All refer to different methods of storing information, and all hold different amounts.

Document is basically a synonym for file. It refers to anything produced by an application. However, in the earlier days of computers, it often referred specifically to files produced by word processors only.

Documentation is similar to a manual which tells you how to operate a program. Usually this term is used in reference to shareware programs.

Perhaps the most important term of all is **DOS** (Disk Operating System). This is what really runs the computer. It is software, often a collection of commands, that operate the computer. Unfortunately, different computers use different systems. Amigas, of course, use AmigaDOS, while most IBMs and their compatibles use MS-DOS. Because of this, Amiga software, in general, will not run on IBMs and vice versa.

An **editor** is a program that allows the user to create or alter files. The most common type of editor is a text editor, which is similar to a word processor but minus the luxuries. The traditional Amiga text editor is ED. Text editors are not intended for lengthy works; they are quick and simple. They also produce ASCII text, so anything that you produce on a text editor can be read by other computer systems if they can be transferred to those systems via telecommunications or other methods.

Sometimes the commands you try to execute are not successful and you receive an **error code**. Most manuals provide information about the error codes and what they mean. For example, error 103 means there is a lack of RAM.

As you can tell, **execute** is one of my favorite terms. It simply means to run a program.

As I've already indicated, a **file** can be a word processing document, a script file, or a program. It is simply a collection of data in a single location.

One of the first things you must do after buying a box of disks is to **format** those disks. An unformatted disk is not ready to receive and store information. A disk can be used on any machine, whether an IBM, a Mac, or an Amiga. By formatting it, you prepare the disk to receive information from one of these systems. **Format** is also used in reference to how AmigaDOS commands are to be written. A format is much like a formula. To make the command work, all parts of the format must be accounted for. In word processing, format can be used to refer to the appearance of a document. It concerns things like the font used, the size of the font, how the document is arranged, and other similar items.

Global is a term you will see the more you learn about script writing, programming, and other technical aspects. Its opposite is local. Global means that all processes, applications, and other programs will be affected. Let me share a recent example. One of my students was producing a word processing document just a few days ago. Suddenly, he hit some key combination that he could not recall, but it caused characters to appear doubled. In other words, if he hit the letter 'd' once, two 'd's would appear. Not only was the word processor affected; the command line, other word processors and editors — everything — was affected. The effect was global.

You may have run across the term **hierarchical**. This simply means the Amiga can have directories (drawers) which can contain other directories, which can contain other directories, and so on, and so on, and so on. All of these directories can, of course, hold files as well as other directories.

In a recent article, I discussed the **history buffer** of the Amiga Shell. This buffer can store the most recently used commands executed from the command line so that you can later retrieve them by using the arrow keys.

If you use the command line regularly, you won't see many **icons**. Icons exist in the GUI (Graphical User Interface — in other words, the Workbench) to represent files, directories, and other items. You select such icons by using a mouse.

As told by AC Tech #3.4 and Amiga World Aug. '93...

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Speaking of icons, if you like using them, you need to be familiar with **.info** files. Every icon has an **.info** file. You can add icons to files that don't have icons by copying other **.info** files and giving them the same name as the file you wish to attach it to. Of course, you have to make sure it is the same type; that is, put tool icons on tool programs, disk icons on disks, and so on.

Before you can use a disk, you must **initialize** it. This is the same as format, which was discussed earlier.

Numerous AmigaDOS commands are **internal**. This means they are built into the computer. Such commands respond more quickly than commands which have to be loaded from either a disk or even the hard drive.

That's all for this month. Hopefully you are finding these terms useful. I would suggest that you cut them out and keep them handy next to your computer. I have always found that manual glossaries are inadequate because they are too technical for simple-minded folks like myself.

•AC•

Please Write to:
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P.O. Box 2140
Fall River, MA 02722-2140

bug bytes

by John Steiner

tips

hints

workarounds

suggestions

updates

fixes

Bug Fix in February 1994 Bug Bytes

First things first, we have to correct a bug found in the February 1994 Bug Bytes. Mark Odell included a script that somehow had gotten incorrectly formatted when it was printed in the issue. Here is the corrected script.

```
DH0:Workbench1.3/c/Assign TO: DH0:Workbench1.3
; modify above "DH0:Workbench1.3" references to point to your system's
; WBL3-storage directory
TO:c/Version >NIL: graphics.library 37
TO:c/If NOT WARN
;then WE ARE IN KICKSTART 2.0
TO:c/Assign >NIL: TO:
Execute s:Startup-Sequence2.0
Quit
Else
;then WE ARE IN KICKSTART 1.3
TO:c/If EXISTS TO:c/MoveSYS
TO:c/MoveSYS cd TO: ;FF 429
Else
TO:c/Assign c: TO:c
Assign SYS: TO:
Assign devs: SYS:devs
Assign fonts: SYS:fonts
Assign l: SYS:l
Assign libs: SYS:libs
Assign s: SYS:s
EndIf
Assign TO:
Execute s:Startup-Sequence
Quit
EndIf
```

Co-Processor Selection on the A4000/30

Ed Jakober sent E-Mail regarding Dave Berard's request for information on using a co-processor in an A4000/30. He writes:

You can tell Dave Beard that you can put either a PLCC or PGA type co-processor on the processor board of the A4000/030. There is a place for each. The one you install is selected with a jumper. If you use the system clock speed (25 MHz) or install a faster clock, it is also selected with a jumper.

David King also sent E-Mail regarding his experience in installing the FPU. He writes,

In response to Dave Berard's request about adding a FPU to the A4000/030: I work for a local Amiga store in Las Cruces, NM. About a week ago I was sent to a customer's home to install a FPU in his A4000/030. The tech support people my boss called before sending me out "claimed" it was a Plug And Go operation. Not in this case.

My instructions were to install a 40 MHz 68882 in a A4000/030 (25 MHz). The problems I had, and I'm a E.E. and have been working on Amigas since 1986, were as follows:

- (a) I wasn't given a 40MHz clock crystal/chip.
- (b) I wasn't given any A4000 specs on adding an FPU
- (c) I didn't have a clue if it needed a PLCC or PGA (given a PLCC) (...and I had to drive 80 miles to install the stupid thing).

Results:

(a) The A4000 does have a System Clock/Alternate Clock jumper, so I figured I'll run it at 25MHz now and add the 40MHz clock later. (Running slow isn't the problem, but a 25MHz part at 40MHz would have been).

(b) Getting to the board required removing the cover, removing the hard drive (four screws right on top), removing the front plate (seven little plastic tabs, squeeze with needle-nose pliers), remove floppy assembly (two screws, under front plate). Now pull the board out. This is all in the "A4000" book that comes with your machine, but under "Adding a HD", "Adding Floppy Drives", "Changing the CPU board" sections. None of this was hard (actually quite easy compared to some A2000/A3000 systems I've dealt with.) Overall, it's easy to get to the CPU board, even for a novice.

(c) With the board removed, I saw a surface mounted EC030 and some holes which appear to be for adding another CPU instead of the surface mounted one. There are two jumpers, ALT/SYS for the clocks and one titled FPLCC/FPGA. This board had a PLCC socket next to the CPU and some holes (I assume for a socket for a PGA, the PLCC/PGA jumper headed over in this direction).

After studying the board, I installed the PLCC 68882 in the socket. The jumpers were already set for a PLCC and the system clock speed. I then put the whole mess together (including removing the two 1MB SIMMs and replacing them with a 4MB SIMM, and changing the Size jumper). The machine REFUSED to boot, even the hard drive wouldn't power-up. This lead me to think something was shorting. I never found a short, but I removed the FPU and everything works. After looking at the CPU board, I noticed a set of holes (like for a jumper) marked Ins/Dis. I don't know if this is for Installed/Disabled or something else (maybe not even the FPU even though it's right next to it). After talking to the tech people, they still say it's Plug and Go. Maybe, maybe not. Given I was on a tight schedule, I haven't played with it enough to know. Maybe it just needed to be removed/reseated to work. I don't know. (Given the owner really wants a 40MHz FPU, I am looking into adding the faster clock and haven't tried putting it back in.)

All in all, it SHOULD work, but it didn't in this case, which I would say ISN'T a good example. If Dave or anybody else wants to try this, I'd say buy a 25MHz (so you don't have to add a faster clock) and spend A LOT of time making sure EVERYTHING is seated right. It should work. And don't add anything else at the same time. Maybe the RAM I added got seated properly when I removed the FPU and was the root of the problem. Who knows.

Dave Soper of Bitburg, Germany notes that

The A4000 sold in my theater of operations comes equipped with a revision 2 daughter board. The CPU daughterboard is fitted with one PLCC socket and drilled out trace leads with no socket for another processor and oscillator. In Europe and in most corners of the outer markets, the PGA type chips are much cheaper. A lot of us old users happen to have PGA co-processors on boards that no longer get any use. By carefully soldering the PGA co-processor into the open traces on the end of the daughter board, the same results can be achieved (and will void the warranty just as quickly.)

Expanding Your CDTV

Robert King of Bowie, MD writes to reply to the questions raised by Michael Blakely concerning CDTV expansion. In addition to my specific suggestions, he provided the following information.

1. *SCSI Disk adapters.* The Winter '94 AC's Guide (page 143) lists SCSI-TV from Amitrix Development in Alberta, Canada as having the little adapter card required to connect external SCSI devices to the CDTV.

2. *Memory expansion.* I have installed a DKB MegaChip 2000/500 with a 2 Megabyte Agnus chip and doubled my Chip memory. The personal memory card slot on the front of the machine (as delivered) can handle a 64KB or 256KB memory module, but this is not really available as RAM unless you write some custom code. By connecting a couple of jumpers inside the CDTV (you must get the schematics to locate them), you can increase the addressing range of the memory module to 1MB. But, you probably cannot find a PCMCIA card with the correct pinout.

3. *I haven't tried to do this.* I have an A2500/20 and an A3000T/25. We just use the CDTV to play games, watch CD+G disks, or play CD's. Whatever is used would have to fit FLAT onto the 68000 CPU chip socket, as there is less than 0.5 inch clearance to the top of the case.

4. *Check the dealer and the AC's Guide.* Several vendors offer keyboard adapter cables for the CDTV.

5. *I have successfully used ParNET, but ParNET requires a *CUSTOM* cable, not a standard one.* The other option is to get a 25-pin straight through male-male cable, and use the Radio Shack P/N 276-1403 RS-232 Shielded Jumper Box to cross connect the proper lines as per the ParNET documentation.

Also, Mark Raymond wrote to tell us about his specific solutions to a couple of Michael Blakely's questions.

1) Yes, it is possible to add a hard drive. AdIDE, by ICD, works very well. Depending on which mounting kit is ordered, either a 2.5" or 3.5" drive can be installed. Because of the extremely limited space in the CDTV, I added the 3.5" drive in an external case. The case I used is a PC standard external model with its own power supply. I also had to modify the drive's ribbon cable so it would reach to the external drive.

2) The CDTV can be accelerated to an extent. I've installed an AdSpeed in my CDTV. It's only 14MHz, but it is faster. I've had no compatibility problems with any of the CDTV titles that I have.

To be honest, I have the AdSpeed/AdIDE combo board. This board has BOTH the IDE interface and AdSpeed in one package. If you buy each board separately, they stack up and won't allow the case to close.

Thanks to everyone who wrote with information regarding CDTV and its available accessories.

1 MB Upgrade and the A500

Mr. Daymon also commented on a couple of other topics. In the November 1993 Bug Bytes, the viability of upgrading an A500 to 1MB chip RAM was discussed.

Since the release of the A570 drive, Commodore has rescinded the statement regarding A500 motherboard modification. In fact, the "one-meg-hack" is THE upgrade given to you when you buy an A570. (CDTV programs EXPECT one megabyte of Chip RAM) So there is no longer concern about the conversion. You STILL must have it done by an authorized service center, and if you purchase an A570 CD-ROM drive this service is free.

A2002 Monitor Notes

Mr. Daymon also commented about the A2002 monitors mentioned in the October 1993 Bug Bytes.

I have seen four A2002 monitors (including the one I use on my A500) exhibit the same problem that Mr. Clayton describes. In addition, it takes

about 40 minutes of warm up time before it can display a PAL screen. Another problem of most A2002 monitors is that they "POP" rather loudly on occasion. To fix the hi-res interlace problem, you must "play" with the vertical hold on the front of the monitor - you will notice that as you turn the knob, one set of scan lines will move up and down the screen. You must center THESE lines in between the lines which aren't moving. For monitors that pop, you have to take the monitor apart and connect the large aluminum heat sink to ground. Due to the design, one of the metal tabs on the heat sink is close enough to a trace on the motherboard to arc intermittently. Connecting the heat sink to ground should fix the problem. (Other monitors affected by the "pop" include some 1080, 1084, and 1902A monitors.)

Screen Mode Utility Problems

Mr. Daymon provided an example of how some software can cause other software to fail to operate properly. He notes,

Regarding a problem I sent in a while ago, I mentioned that, after loading certain programs, the ScreenMode utility would cease to function. Some programs need some sort of "console" window on the Workbench, so they open a 1x1 pixel window for output upon running—and they don't close the window upon exit. The windows are rendered in a color that is not detectable on the screen. A properly written update of any said program should "clean up after itself" and not cause this problem.

Vortex Board Workaround

In the February 1994 column, Mark Odell commented on a question by Juan Nunez in the 6/93 issue. Howard Clayton sent E-Mail with a solution to the problem. He writes,

The answer I found to the problem was to Amiga Format the Hard Drive with IBM partitions between Amiga partitions. This leaves a boundary the PC286 can find. Otherwise it only formats and finds 1/2 of the allocated space if the IBM sections are last. Don't know but it worked for me. I set mine up as DH0: IBM: and then DH1:

That's all for this month. If you have any workarounds or bugs to report, or if you know of any upgrades to commercial software, you may notify me by writing to:

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c/o Amazing Computing
Box 2140
Fall River, MA 02722

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John Steiner on Portal
73075,1735 on CompuServe
Internet mail can be sent to
John_Steiner@cup.portal.com
FAX John Steiner at (701)280-0764
(8:30 A.M. to 5:30 P.M. Central time, Monday-Friday)

•AC•

PD UP

DATE

BY HENNING VAHLENKAMP

This month's column has a special AGA games focus; the four games examined either require AGA or offer AGA enhancements. They are all system-friendly and hard disk installable—things many of their commercial counterparts could learn. There still aren't very many AGA non-commercial games, but as these show, the existing ones have much to offer. And I'm betting more are on the way with the proliferation of AGA Amigas.

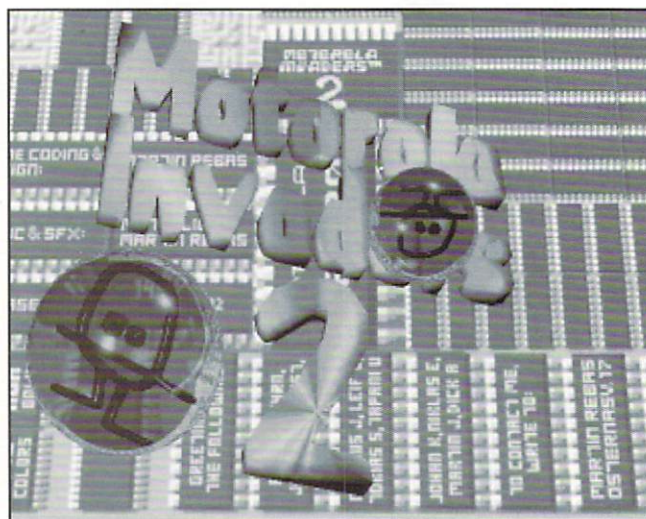
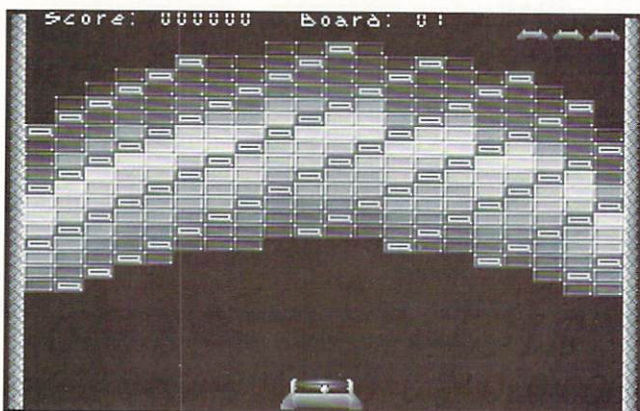
The programs mentioned here are usually downloaded from Aminet ([ftp.wustl.edu:pub/aminet](ftp:wustl.edu:pub/aminet)) or FUNET (<ftp.funet.fi:pub/amiga>) on the Internet. They also should be available via other sources such as online services (Portal, Delphi, etc.) or BBSs. Unless otherwise noted, they work with all Amigas and AmigaDOS 1.3+.

MegaBall 3.0 (shareware, \$15)

by Ed Mackey

Aminet: [/game/misc/MegaBallAGA.1ha](ftp://game/misc/MegaBallAGA.1ha)

MegaBall, without a doubt, is the premier non-commercial Arkanoid clone, even surpassing some commercial ones. The premise is simple enough: use your paddle to bounce a ball around the screen in order to eliminate various configurations of bricks. Eliminating all of them takes you to the next of the 50 boards. Sometimes when the ball hits a brick, a "bonus piece" drops down. These pieces have 14 different, imaginative effects ranging from changing the size of your paddle to ending your current life. The



color of a brick determines its point value; I especially like the flashing "exploding" ones which rack up many points by setting off chain reactions with neighboring bricks.

Working with all Amigas, MegaBall autodetects AGA. If found, you get 128-color graphics, and if not, you get the usual 32-color ECS graphics. Everything is top-notch, from the design to the graphics and sound. Sending in the shareware fee means a few hundred more boards to play and a board editor. Really good stuff.

Motorola Invaders 2 (AGA, 3.0+)

by Martin Rebas

Aminet: [/game/shoot/motorin2.dms/game/shoot/motorinv.dms](ftp://game/shoot/motorin2.dms/game/shoot/motorinv.dms)

This game's "Space Invaders" theme is nothing new, but its knockout audiovisual qualities should appeal to AGA owners. In Motorola Invaders 2, you control a small spaceship at the bottom of the screen, trying to blast through eight levels of "virus" aliens; actually, they look like stick-figure faces with arms, legs, and no bodies. The screen literally swarms with them, making your three lives seem meager. By level three, things really get challenging.

Aside from the frenetic animation, you're treated to great 24-bit Copper backgrounds, 128-color graphics, and a truly awesome sampled Metallica soundtrack. This extravaganza requires 1.4MB of CHIP RAM, and remember to switch to a PAL screenmode before running it to avert a crash. Motorola Invaders 2 is not only playable, it's also something to reach for when showing off your Amiga.

Top: Motorola Invaders 2.

Right: MegaBall 3.0.

Opposite Top: UChess 2.54.

Opposite Bottom: NewWorld 1.31.

NewWorld 1.31 (shareware, \$25; 2.04+)

by Kevin A. Roll

Aminet: /game/misc/NewWorld131.lha

Based on the classic *Seven Cities of Gold* released a decade ago for the C64 and other 8-bit computers, New World recaptures the magic of that game on the Amiga. Your goal is to set sail from Europe and explore a new (randomly generated with an included program) continent, while interacting with its natives. Trading with different villages and establishing friendly relations is easier than conquest, although you can choose either path. Scoring is based on how much you discover, not on how much gold you accumulate. Gold, however, is still necessary for return trips to Europe to buy additional supplies such as ships and goods. Furthermore, the crown grants gold for your discoveries every time you return, and you can play indefinitely.

New World may sound simple, but there's a lot of subtle strategy involved. For example, since ships can carry a limited weight, you must maintain a good balance of men, food, and goods. And wisely building forts and caching supplies pays off in the long run. The depth of play makes it that much more fun.

Requiring 1MB of contiguous memory and a 68020 or better for optimum performance, this game uses its own 32-color screen with resolutions of 640x400 for AGA Amigas and 320x200 otherwise. Reminiscent of *Seven Cities*, a window in the center of the screen depicts an overhead view of your surroundings, and movement is accomplished via joystick. Status info appears around the window, and the various requesters and menus are self-explanatory. Even those not familiar with *Seven Cities* will quickly get the hang of New World—a great discovery in shareware.

RSys 1.3

by Rolf Boehme

Aminet: /util/moni/RSysV1.3.lha

I may have spoken too soon last time (AC v9.3) when I proclaimed Xoper 2.4 to be the most comprehensive Amiga system monitor. Upon recently discovering RSys, I was pleasantly surprised to see its wonderfully refined menu/gadget driven interface. There's no command line here.

RSys opens a window on Workbench with an array of 16 buttons at the bottom for its most common functions. All other functions are accessible through plentiful menus. It can display at least as much information as Xoper, if not more, but getting that information is quite a bit easier. RSys also displays Preferences configurations, custom chip and expansion hardware info, as well as en/decrypts and finds files, among many other niceties.

Unfortunately, all the documentation is in German, so unless you can read that language, you're on your own. Then again, if you understand the Amiga well enough to make sense of the informa-



tion RSys provides, you probably won't miss the documentation too much. To completely replace Xoper, RSys needs to track everything dynamically, including CPU usage which it doesn't show at all. For instance, if you have a task list displayed and then quit one of those tasks, the list isn't updated automatically; you have to click on a button.

UChess 2.54 (2.04+)

by Roger Uzun

Aminet: /game/think/UChess254.lha

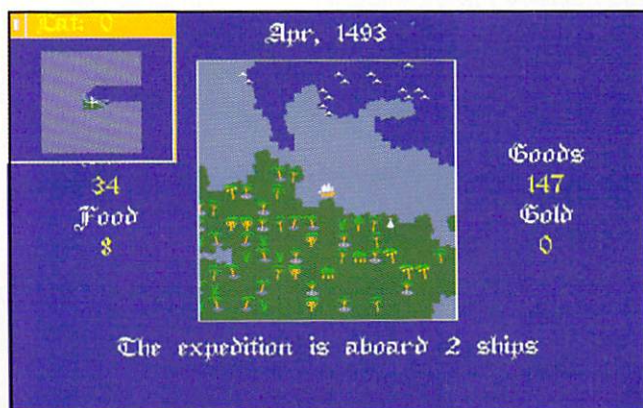
/game/think/UChess254Patch.lha (upgrade patch)

While a great many Amiga games are written for the lowest common denominator, this isn't one of them. UChess, an Amiga port of the public domain GnuChess chess program, comes in two versions, each of which demands a power premium. The low-end version requires at least a 68020 and 3.5MB of FAST RAM, while the high-end is optimized for the 68040 and 8.5MB of FAST RAM. Both provide a 640x480x256 color display with the Multiscan monitor driver, as well as a less attractive 640x400x16 color display for non-AGA machines. The author claims this is the strongest chess program for the Amiga, and considering the hefty memory requirements for the artificial intelligence, I am inclined to believe it.

Upon loading UChess, you'll see a beautiful—at least in 256 colors—2D chess board occupying most of the screen and small info windows for each player and the general game status. Menus offer features including any combination of computer and human players, three skill levels, loading and saving games, computer thinking time limits, and movement hints. The game editor allows you to set up custom boards, but makes this process tedious by requiring you to type in algebraic chess notation for each piece. Although this notation also can be used during play, clicking and moving pieces with the mouse is far easier. By the way, UChess saves transcripts of games as log files too.

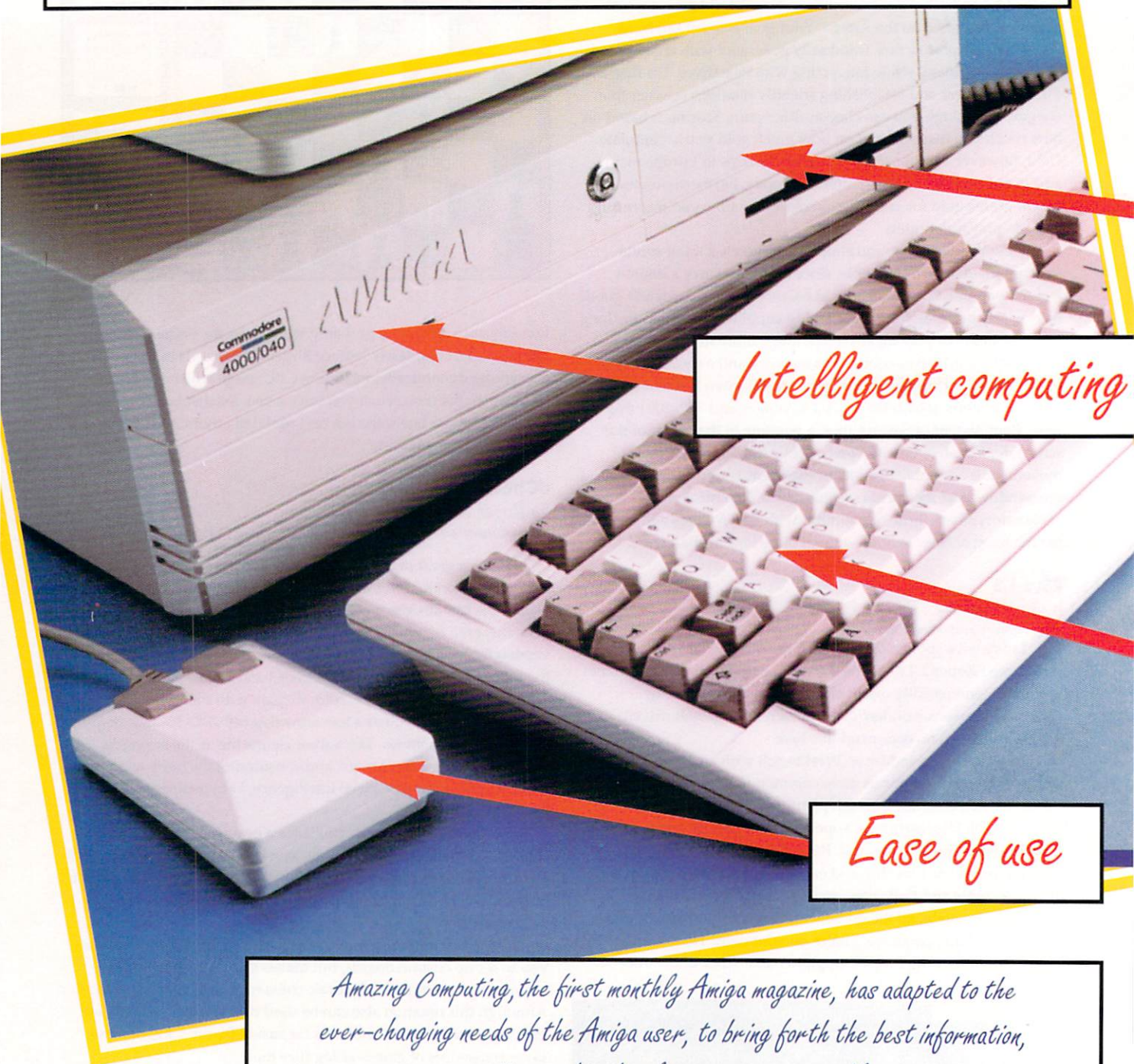
Besides a simpler board editor, the only other significant improvement I'd like to see is a 3D board. If you want an excellent game that takes advantage of your powerful Amiga, definitely check out UChess.

•AC•



Please Write to:
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P.O. Box 2140
Fall River, MA 02722-2140

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Volume 9 No. 2 February 1994
US \$3.95 Canada \$4.95

In This Issue

- Lens Flare in Imagine
- Amiga on the Internet
- Desktop Publishing & Forms
- Organizing Files with ProPage
- AGA

Tailored to the user

Reviews

- Diner Object Set
- Magic Lantern
- Tape Worm-FS
- FinalWriter
- EGS 28/24 Spectrum

Amazing Computing & the Amiga

new games for the Amiga



Feedback

Letters to the Editor

The Netherlands—Make Fred Fish Easier to Read.

FIJI—Please Review the CEI 4000M.

U.S.—Get Commodore U.S. to Talk More.

Dear AC,

I would like to comment on Mr. G. Stone's idea in your Feedback column for January, 1994 regarding the black and blue Fred Fish Disk list.

I am very surprised and very disappointed. A color background is very nice indeed to watch and view on fractals, software reviews, etc., but it is difficult to study the Fred Fish Disk column of this recent issue. Black text on a rather dark blue color background is extreme. Perhaps a light color can be used instead to satisfy a reader like Mr. Stone.

"...it was very hard for me (and probably other readers as well) to read your Fred Fish column with this unreadable text."

I am very interested in the Fish collection in every issue. If there is something useful, after reading your review column, I can copy this particular Fred Fish disk number from the local computer hobby club.

Now my great disappointment. I am an old man of almost 70 years of age and, upon receipt of the latest issue of your magazine, it was very hard for me (and probably other readers as well) to read your Fred Fish column with this unreadable text. This is especially difficult in this dark Winter period. Although, I think even with the bright light of Summer it would be very hard to read this text even with the use of binoculars. The idea is not to strain your eyes...

In conclusion I would suggest that you print this review once again as a supplementary copy with black ink on a white background. This doesn't need to be fancy with a colored background because it is only text!

Yours very truly,
K.H. Tjoa
The Netherlands

Dear Mr. Tjoa,

You are correct. Although we had chosen a lighter background, the color came back a bit more intense than we had expected. In this issue we have dropped the cyan from 100% to 40%. Unfortunately, desktop publishing can still go awry when you are not in perfect synch with your printer.

The reason for the color is to make the listing stand out, not hide it. It has been unfortunate that the last few months have been so crowded in the

issue that we have not been able to continue running the Fred Fish Disk list with screen shots. We hope to do this once again so that this section is not "only text."

Due to the large number of articles in AC, I cannot honor your request to reprint the section. I can (and will) send you or any other reader who requests it, this section reprinted on white.

I might also remind you that a full text of the collection's latest versions of each program are available in AC's GUIDE To The Commodore Amiga. AC's GUIDE is our best avenue to keep you as up to date on the changes in the Fred Fish Collection as possible. It is also a very good reference for commercial hardware, software, and services on the Amiga—sorry, that was a shameless plug.

—ED

Dear AC,

In your December 1993 editorial you stated that unnamed sources said Commodore U.S. had record sales for both the A1200 and the A4000 in the previous quarter. As you hinted, Commodore never announced this or any other U.S. sales figures.

If your information is correct, I am very confused by John Dilulu's infamous comments at the CES regarding the attempts to discontinue the 1200 and the 4000/30 in the U.S. I know this is too obvious a question, but if U.S. sales are good, why give up on the 1200 and the U.S. home market, and why is it not possible to justify the expense of advertising stateside? If you have any sources that might answer this, I would be most curious as to their reply.

Let me complement you on your interview with Lew Eggebrecht. This is exactly the type of press that we the Amiga community are searching for. While the nets are filled with rumors and flames on everyone from Mehdi Ali to the woman that answers the tech line, you publish an up-front and frank discussion with someone actually "in the loop." I encourage this wholeheartedly and urge you to pursue this course to the limit of your resource. A British magazine runs a monthly column from the head of Commodore U.K., David Pleasance, which, though mostly hype, serves a purpose two fold. It reassures readers to Commodore's user commitment and it removes the featureless wall that exists between the end user and management. Amiga users more so than any other platform are acutely tuned into the fate of their computer manufacturer. I suggest a similar column, though hopefully more meaty, would be a valuable resource to the U.S. Amiga community.

If such a commitment is not forthcoming from Commodore U.S., interviews with Geoff Stilley, John Dilulu, Jeff Porter, John Cambell, Irving Gould, Mehdi Ali, and the PR firm for CD³², Anthony Franco, Inc., would each prove to be welcome additions to your fine magazine.

Like wise any follow-ups with Mr. Eggebrecht would be appreciated as he now seems to be the sole member of senior management who has a vision and direction for the Amiga.

Finally let me suggest to further your position as the Amiga resource that along with your FF guide you publish the names and addresses of key CBM personnel. All of these are available but publishing them in a single comprehensive source would be greatly appreciated.

Eric A. Pot
Chicago, IL

Dear Mr. Pot

Thank you for your kind words. Your suggestion concerning additional interviews with key Commodore personnel in a monthly column was voiced in this column last month by Mr. Doug Libby of Chico, CA. My answer to you remains the same as my answer to Mr. Libby, we have consistently sought this type of feedback from the Commodore executives and we will continue to do so.

I believe that the only way Commodore can work its way through the difficulties it currently finds itself in is to turn to Amiga users for support. Unfortunately, comments such as those contributed to Mr. Dilulu are not going to help the cause.

Due to the world-wide problems with CBM (please see the editorial on page 6 of this issue), it is extremely urgent that CBM move quickly to clear up any misunderstandings and use all their resources to promote the Amiga. However, these same problems have created smaller staffs who are very overworked. The result is it has become even more difficult to get these staffers "on the record." But, never fear—we will not stop.

—ED

Dear AC,

I read the review of the shareware program *MegaD* in the November 1993 issue, and ultimately bought the current registered version. I was looking for a replacement for *Diskmaster 2* (Progressive Peripherals and Software is out of ((the Amiga)) business), and was not impressed with the expensive *Directory Opus 4.0*.

I am more than delighted with *MegaD*!! The program is tremendously customizable, fast, stable, and intuitive. *MegaD* is much superior to *Diskmaster*, and far more affordable than *Directory Opus*. A big selling point with *MegaD* is that it creates a small panel on the Workbench, and does not interfere with your access to other volumes and programs.

MegaD is good enough that it should be licensed by Commodore and provided with all new machines. I highly recommend it as the best directory utility available for the Amiga.

Sincerely,
Jeffrey T. Powell
West Covina, CA

Dear AC,

The *New Products* column in the March 1994 *Amazing Computing* mentioned a new multimedia workstation built around the Amiga 4000. The article was entitled *CEI 4000M* and credited Creative Equipment International as the manufacturer, reader inquiry #205.

I am very interested in obtaining further information on this product. At present I live in Suva, Fiji in the South Pacific where my wife is a diplomat with the U.S. Embassy. When we return to the U.S. in 1995, I think I'll be in the market for a new, more powerful computer.

My current dilemma is that I am torn between two options: 1) investing in a new 4000 (I currently use an Amiga 500 with extra RAM), and 2) ditching Commodore altogether and going over to the Macintosh camp. After years as an Amiga owner, I've become convinced that the management at CBM have no interest in promoting their computers, despite the interest that Newtek's Toaster and Hollywood have sparked in the Amiga. I have no confidence that they will support the advance of the 4000 line should I opt for that choice. Anyway, I'm thinking that perhaps this new workstation might allow a compromise.

Could you please forward my request for information on to Creative Equipment International or, failing that, send me the address so that I might write them directly? Also, do you think there is a chance that *Amazing Computing* might write a review on the CEI workstation? I'm sure the literature provided by them will all be in glowing terms. An independent and unbiased assessment would certainly be valuable.

Finally, my congratulations to you and all the contributors to *Amazing Computing* for a very entertaining and informative magazine.

Sincerely,
Stephen J Hatton
American Embassy—Suva Fiji
Dept of State
South Pacific

"If such a commitment is not forthcoming from Commodore U.S., interviews with Geoff Stilley, John Dilulu, Jeff Porter, John Cambell, Irving Gould, Mehdi Ali, and the PR firm for CD³², Anthony Franco, Inc., would each prove to be welcome additions to your fine magazine."

Dear Mr. Hatton,

We have faxed your request for more information directly to CEI. There is also an article on page 36 of this issue concerning CEI and its use of Amigas in everyday business.

CEI has also agreed to supply us with a unit for review. I can't promise when the review will be seen (I only received their promise yesterday), however, we will do everything we can to get a penetrating look at this turn-key solution as soon as possible.

For more information concerning CEI, you can reach them direct at: Creative Equipment International, 5555 West Flagler Street, Miami, FL 33126, tel (305) 266-2800, fax (305) 261-2544.

—ED

*Send letters to Feedback
c/o Amazing
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•AC•

AMIGAS IN BUSINESS

by Roger Thompson

Amiga Operations at Creative Equipment International

The Amiga computer has always been known as the powerhouse when it comes to graphics and video. Thousands of applications abound in these creative fields, but to the casual observer, it appears the Amiga has no place in business. This, of course, is far from the truth. Unbeknownst to most, Amigas are being used by all types of enterprises. These include videographers, retail stores, printing shops, small businesses, and even large businesses to control day to day operations.

An outstanding example of this is Creative Equipment International (CEI) which has a large, fully integrated Amiga business network. This network is used for a multitude of business activities all revolving around the Amiga.

Creative Equipment started as a Commodore authorized dealer in 1977 selling the original Commodore PET Computer. In the past few years it has grown to one of the largest multimedia distributors in the world. CEI currently distributes products such as Amiga, NewTek Video Toaster, DKB, GVP and many other products exclusively to authorized dealers in the United States and Latin America. The likelihood is the Amiga which you own has at one time or another been in a Creative Equipment International facility. Even though the exact numbers were not divulged, CEI being a privately held concern, probably tens of thousands of Amigas have been processed through CEI facilities. It is impressive to walk through one of CEI's warehouses and see thousands of Amigas neatly stacked up on one side, hundreds of Newtek Video Toasters on a rack, hundreds of GVP products on another and so on.

CEI's needs are similar to any other major business concern, i.e. inventory, accounts receivable, accounts payable, general ledger, shipping, payroll, return authorizations, tracking, order processing, publicity, etc., and are all handled with Amiga computers. During a recent visit to CEI's Miami facilities, I received a comprehensive tour. Their Amiga networked system currently connects 42 Amiga 4000/040s with monitors, with a squadron of different printers, bar code scanning equipment, 3 modems, 2 CD-ROM drives, and a host of other peripherals. Not a PC in sight. All machines are fully integrated and networked.

When the building was designed, every office received multiple ethernet ten base-T drops. All the A4000/040s are populated with 18MBs and the Commodore A2065 ethernet card. Some 4000s contain additional peripherals such as GVP's multiseriial card, bar code scanners, etc. The Commodore ethernet card has an AUI connector and a thin-net connector. In order to convert to ten base-T, Ansel transceivers were utilized throughout. Each computer is directly connected to a concentrator which throttles the ethernet flow. In addition, if a

problem arises with an ethernet card or a transceiver, the rest of the network is not affected. Having worked in a facility with a large computer network and having seen one defective machine bring down an entire network, it's obvious that CEI has made every effort not to let that happen. All crucial machines are further protected by uninterruptible power systems. There are even provisions for employees to call and connect to the network with their Amigas from home.

Enlan-DFS networking software from Interworks is used to manage the network. Enlan-DFS is a true peer to peer networking system. Due to the heavy traffic, CEI put in place an Amiga 4000/040 to be utilized as the "file server." The "file server," even though not a real file server in the normal sense, has two high speed SCSI-II 2.1 Gigabyte hard disks drives. One is used for all transactions



while the other is used for mirror backups which are automatically conducted nightly through an Arexx program. This proprietary Arexx program which CEI refers to as the "Watchman" not only backs up the hard drives but also generates non-time essential reports and updates.

The disks are split into multiple partitions which include a plethora of standard Amiga programs, a partition that contains the business activities, a partition for personal data, and a partition which controls the printers. All employees can use any of the Amiga standard programs from their own workstations including desktop publishing, calendar scheduler, paint programs, demo software, etc. All graphics, including dealer bulletins, mailouts, and advertising, are done utilizing this network.

The power and beauty of the system lies in a custom program that was written and modified over the years by a CEI staff programmer using *Sbase4* from Oxix. Since record locking is not supported by the current release of *Sbase4*, the programmer used a number of semaphores to prevent other individuals from editing the same record simultaneously. The program uses point and click menus and is written to allow any non computer literate person to operate the entire system. The volume of information tracked by the system is truly spectacular. Data including dealer sales, product serial numbers, motherboard revisions, contacts, production batches, etc. are all accurately maintained. To facilitate the order processing, every item which arrives at CEI receives a unique bar code. Warehouse personnel are issued portable laser bar code readers. As orders are processed and shipped, each item is scanned and recorded. This information is downloaded to the Amigas at the end of the day for night processing by "Watchman."

Another of the interesting aspects of the system is the way printer management occurs. Included in the twenty printers are two high speed bar code printers, one high speed line printer, eight laser printers, five laser/fax printer, one Fargo Primera color printer, and a number of dot matrix printer (labels, shipping tags etc.). Any person can print any document on any printer without ever having to leave his/her desk. The hard disk contains directories that refer specifically to a corresponding printer. The user prints directly from the application to the directory assigned to the printer chosen. An Arexx spooler program checks the directories and, when it finds a document, sends the output to the correct printer. This process is totally transparent to the user.

By utilizing the laser/fax postscript printers, anyone can create a document on their favorite program and fax it directly from their desk. The custom program allows for dealer quotes to be created and automatically faxed within seconds. On my recent visit it was amaz-



ing to see the volume of activity processed with Amigas. Hundreds of machines, peripherals, and software are shipped out every single day.

The CEI facility also has an impressive multimedia conference center. An Amiga 4000 running Scala is connected to an IKEI professional video projection system with surround sound. Presentations can be created by any employee on any workstation and then presented in the conference room. CEI's employees are required to create and present departmental updates to all employees using Scala Multimedia. This is done on a weekly basis.

As if this isn't enough, telephone lines are monitored by Amigas. Strict tracking as to whom the salespersons call, duration of call, time of call, and zones, are maintained in a database. This allows the supervisors not only to judge actual salesperson performance, but also allows management to determine the best long distance telephone services. There is no time card machine visible anywhere on site, of course the employees log in and out on their Amiga 4000s.

CEI staff like to tell the story of an IBM mainframe salesperson who, after seeing everything the Amigas were doing, decided not to submit a proposal.

The system is far from complete. The staff keeps coming up with new creative ideas to make life easier or increase productivity. The programmer continues to make improvements on a daily basis. "It is obvious that we haven't even come close to reaching the full potential of the Amiga", the programmer says.

At this time CEI has no plans to make their system software commercially available. If Amigas can handle this extremely large complex operation, it can probably handle any business need. CEI calculates that the Amiga network has saved hundreds of thousands of dollars over the cost of a mainframe, which proves the Amiga also means business.

•AC•

CanDo: An Interactive Authoring Tool

Part 9 — SubDecks, Proportional Sliders, and Custom Pointers

by Randy Finch

In this installment, I discuss a *CanDo* deck named *ColorChange* that can be used with other *CanDo* decks. It contains one card, named *ChangePalette*, that uses buttons, proportional sliders, and custom pointers to allow screen colors to be changed, copied, exchanged, and interpolated. This card can be displayed from any *CanDo* deck using *CanDo* commands that treat *ColorChange* as a subdeck. To illustrate how the *ColorChange* deck works, I created another deck named *Colors* that uses *ColorChange* as a subdeck.

The Colors Deck

Listing 1 is a print-out of the *Colors* program; Figure 1 shows its interface. The deck contains one card, *MainCard*. It is a low resolution (320x200) 32-color window containing 32 horizontal color bars, one for each color in the palette. There is a button labeled "ChangeColors" in the lower-right corner of the card. Pressing this button causes the *ChangePalette* card in the *ColorChange* deck to be activated. Before discussing how this is done, let's take a closer look at *MainCard*.

MainCard has three scripts associated with it: *AfterAttachment*, *BeforeDetachment*, and *MessageFromSubDeck*. When the *Colors* deck is first activated, *MainCard* is attached, and its *AfterAttachment* script is executed. This script first determines the number of colors available to the card via the system variable, *WindowColors*. Because color numbers start at zero, one is subtracted from this number and assigned to the variable *MaxColor*. Thus, for a 32-color window, *MaxColor* equals 31.

Next, the value of the variable, *Invocation*, is checked. This variable will be equal to zero when *MainCard* is attached for the first time because all unassigned numerical variables default to a value of zero. *Invocation* is assigned a value of one later in the script. When *Invocation* equals zero, the

global routine *GetColors* is executed. This routine simply assigns the red, green, and blue component values of each color in the palette to arrays named *Red*, *Green*, and *Blue*. Next, the window colors are set based on these array variables. Why bother determining color values and then immediately setting them to what they already are? Well, it turns out that whenever a card is attached, *CanDo* always resets its colors to the default colors regardless of what they were when the card was detached. Therefore, if *MainCard* was just one card in a multi-card *CanDo* deck and the *ColorChange* deck was used to change its colors, these colors would be lost when the card is detached and later reattached. For this reason, the *BeforeDetachment* script executes the *GetColors* routine. This saves the current palette so it can be restored when *MainCard* is reattached. The color component values must also be determined the first time the card is attached to prevent all the colors from being set to black, since the *Red*, *Green*, and *Blue* array elements default to zero before they are initialized. Also, within the same loop that sets the window colors, horizontal color bars are drawn.

When the *ChangePalette* card is about to terminate, a message is sent to the parent deck, in this case *Colors*. This activates the *MessageFromSubDeck* script. Up to ten parameters can be passed to this script; they are automatically assigned to the system variables *Arg1-Arg10*. Only one parameter is passed from the *ChangePalette* card, the string "Quit". The *ClosePendingWindow* command closes any requester windows that have terminated execution. Next, the *FirstCard* command is used to activate the first card in the deck. Since *MainCard* is the only card in the deck, it terminates and then reactivates. This, of course, is totally unneces-

sary, but it illustrates how the new colors for the card are saved as the card detaches and then reset as the card reattaches.

When the ChangeColors button is pressed, its OnRelease script loads the ColorChange deck into a buffer named CC. It then opens the ChangePalette card using the OpenRequester command. Alternatively, the OpenWindow command could be used. There is only one difference between these two commands. OpenRequester opens the subdeck card and prevents user interaction with the parent card until the subdeck is exited. OpenWindow opens the subdeck card and allows user interaction with it and the parent card simultaneously.

The ColorChange Deck

Listing 2 is a print-out of the ColorChange program; Figure 2 shows its interface (as it appears on the MainCard card from the Colors deck). This card's window settings are shown in Figure 3. The origin is set to (20,20) so it will be offset slightly when it appears on top of another CanDo card. It's size is 200x140, smaller than the lowest resolution of the Amiga (320x200). It is important that the window be set to open onto the current screen. If not, the ChangePalette card will appear on its own screen, obscuring the parent card that invoked it. It is also important to make the ChangePalette card a 2-color window. This allows the card to work with any parent card. When CanDo attempts to open a window onto the current screen, it checks the size of the window and its color depth. If the window is smaller and its color depth is less than the screen, CanDo opens the window onto the screen, increasing the window's color depth if necessary. If the color depth of the window is greater than the screen's depth, the window opens onto its own screen. Thus, by making ChangePalette a 2-color window, it will work with a parent card of any color depth.

The ChangePalette card consists of two area buttons, six text buttons, and three proportional sliders. The two area buttons, CurrentColor and Palette, are in the upper-left and upper-right corners of the card, respectively. CurrentColor is only used as a border for a color swatch of the current color and has no scripts associated with it. Palette is used as a container for swatches of each color in the palette.

Three of the text buttons, Copy, Exchange, and Spread, are located between the two area buttons. Copy is used to copy a color to another location in the palette. Exchange is used to exchange two colors in the palette. Spread is used to create graduated intermediate colors between two colors in the palette.

The remaining three text buttons, OK, Cancel, and Restore, are located at the bottom of the card. OK is used to accept the current palette and return to the parent card. Cancel is used to restore the original palette and return to the parent card. Restore is used to restore the original palette without returning to the parent card.

The three proportional sliders, Red, Green, and Blue, are located in the center of the card. They are used to adjust the red, green, and blue component values of the current color. The letters R, G, and B to the left of the sliders indicate which slider is used for each of the color components. Also, the numbers to the right of the sliders indicate the current value of each color component. These numbers can range from zero to 255.

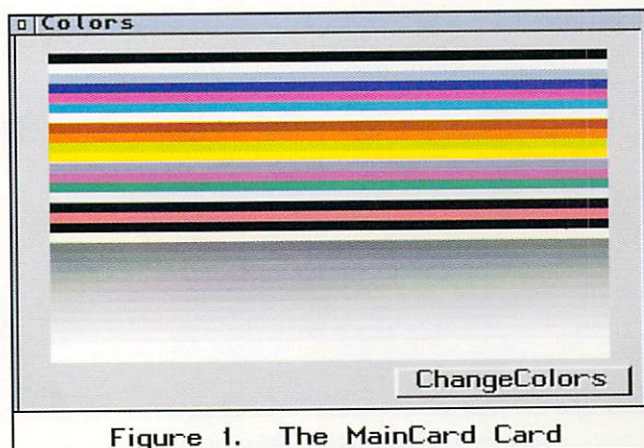


Figure 1. The MainCard Card

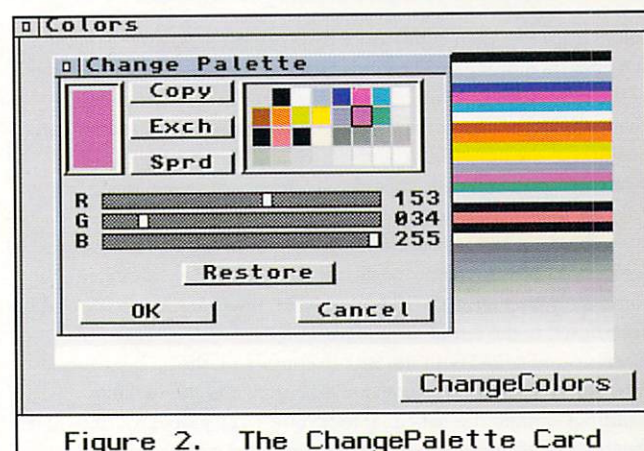


Figure 2. The ChangePalette Card

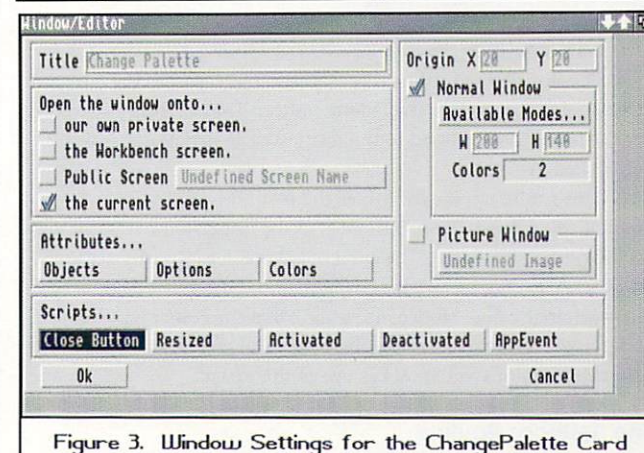


Figure 3. Window Settings for the ChangePalette Card

The AfterAttachment Script

When the ChangePalette card is first invoked with the OpenRequester command in the parent card, its AfterAttachment script executes. This script determines the number of colors in the card's palette from the system variable WindowColors. Remember, CanDo automatically adjusts the number of colors to that of the parent card. Next, the number of rows and columns to be used for displaying the color swatches in the Palette button is calculated. A simple algorithm is used. When the number of colors is eight or less, the swatches are displayed in one row. When the number of

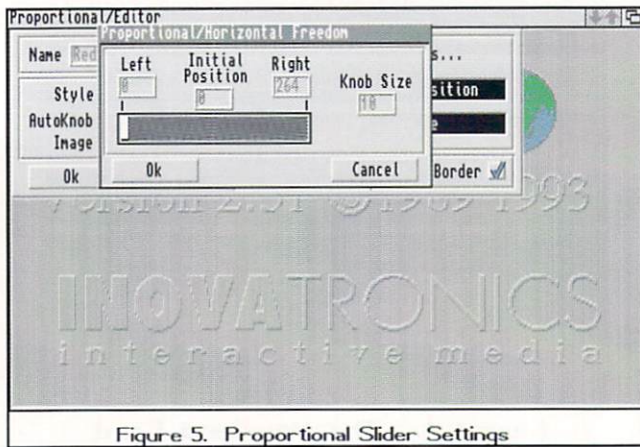


Figure 5. Proportional Slider Settings

colors is greater than eight, more rows are used. Be aware that if a screen with more than 32 colors is used (such as when using some of the new AGA graphics modes), the algorithm may need to be changed. Once the number of columns and rows is determined, the position of the upper-left color swatch and the spacing of the swatches are calculated. Then the swatches are drawn using the `AreaRectangle` command.

The draw mode is set to JAM2 so that when the color values are printed next to the proportional sliders, the new numbers will completely overwrite the old ones. Next, the characters R, G, and B are printed to the left of the sliders. Finally, `PenA` is set to zero (background color) with the `SetPen` command, the global routines `Box`, `SetProps`, and `GetColors` are executed, and the variable `PendingCommand` is set equal to "None". The global routines and the variable `PendingCommand` are discussed below.

The Box Routine

The `Box` global routine draws a rectangle around the currently selected color swatch in the `Palette` button. The pen number to use for the rectangle is passed to the routine as an argument and is referenced as `Arg1`.

This routine first determines the row and column of the current color. Next, the coordinates of the upper-left corner of the rectangle are calculated. The current color is temporarily set to the value of `Arg1`, the rectangle is drawn, and the current color is reset to its original value. Notice in Figure 2 that the color swatches are separated from each other by one pixel. The rectangle that is drawn around the color swatch makes use of this space.

The SetProps Routine

The `SetProps` global routine sets the knob positions of the proportional sliders and prints their corresponding values to the right of the sliders. This is accomplished by first determining the red, green, and blue component values of the current color. The `GetRGB` command returns a value from zero to 255 for each component. These values are printed to the right of the appropriate slider using a format that always prints three digits regardless of the number of digits in the values. For example, values of 0, 5, 25, and 142 are displayed as 000, 005, 025, and 142. Next, the position of the knob for each slider is set using the `SetPropPosition` command. The sliders are discussed in more detail later.

The GetColors Routine

The `GetColors` global routine stores the red, green, and blue component values of each color in the palette to the array variables R, G, and B. This allows the colors to be restored later using the `ResetColors` routine.

The ResetColors Routine

The `ResetColors` global routine restores the original palette colors stored in the R, G, and B arrays. It is used by the `Restore` and `Cancel` buttons.

The Copy Button

The `Copy` button is used to copy the current color to a different location in the palette. First, a color is selected in the `Palette` button making it the current color. Next, the `Copy` button is pressed. This activates the button's `OnRelease` script which changes the pointer imagery and sets the variable `PendingCommand` equal to "Copy". Finally, another color is selected. The red, green, and blue component values of the first selected color are then copied to the palette location of the second selected color. The actual copying takes place in the `Palette` button's `OnRelease` script.

The pointer imagery changes after pressing the `Copy` button to provide visual feedback that an action is pending. The pointer imagery is shown in Figure 4A. The `SetPointer` command is used to display this pointer. It has one argument, a string containing the name of the brush file containing the pointer imagery. As will be seen later, the default pointer can be restored using the `SetPointer` command with no arguments.

The Exchange Button

The `Exchange` button is used to exchange two colors in the palette. The button works the same as the `Copy` button. A color is selected, the `Exchange` button is pressed, and another color is selected. The RGB component values of the two colors are then swapped. The `OnRelease` script for this button uses the brush shown in Figure 4B for the pointer imagery. Also, it sets the variable `PendingCommand` to "Exchange".

Listing One

Listing 1. Colors Deck

```
*****
* Deck "Colors"
* Time 14:15:37
* Date 01/17/94
*****

*****
* Card(s) in deck.
* Card "MainCard"
*****
* 1 Card(s), 1 were printed.
*****

*****
* Natural order of Cards
* Card "MainCard"
*****

*****
* Global Routine(s) in deck.
* Routine "GetColors"
*****
* 1 Global routines(s), 1 were printed.
*****

*****
* Card "MainCard"
AfterAttachment ; used to be AfterStartup
Let MaxColor=WindowColors-1
Nop; Get colors the first time this routine executes
If Invocation=0
  Do "GetColors"
EndIf
Let Invocation=1
```


The Spread Button

The Spread button is used to create smoothly varying colors between two colors in the palette. The button works the same as the Copy and Exchange buttons. A color is selected, the Spread button is pressed, and another color is selected. The RGB component values of all the colors between the two selected colors are changed to provide a smooth transition. The OnRelease script for this button uses the brush shown in Figure 4C for the pointer imagery. Also, it sets the variable PendingCommand to "Spread".

The Palette Button

The Palette button acts as a container for the color swatches representing the current palette. When the button is pressed, its OnRelease script is executed. This script first calls the Box routine to overwrite the rectangle around the currently selected color with the background color, effectively erasing the rectangle that was previously there. Next, the location of the pointer is determined from the system variables mouseX and mouseY. The pointer position is used to calculate the selected color swatch's row and column so the pen number of the color can be calculated. The RGB component values of the current pen, PenA, are stored.

At this point the script determines if there is a pending command by checking the value of the variable PendingCommand. If its value is "Copy", the RGB component values of the newly selected pen are set to the values of the current pen, effecting a copy of the color.

If PendingCommand is equal to "Exchange", the RGB component values of the newly selected pen are obtained and the current pen's values are set equal to them. Then, the newly selected pen's RGB component values are set equal to the original values of the current pen, thus effecting a swap in colors.

If PendingCommand is equal to "Spread", the RGB component values of the current color and the newly selected color are determined. The difference between each of the three component values is calculated and an increment is set for each based on the number of colors between the two selected colors. Then, all of the intermediate colors are set based on these increments.

After handling any pending commands, the newly selected pen is made the current pen using the SetPen command, PendingCommand is reset to "None", and the pointer is reset to its default imagery by issuing the SetPointer command with no arguments. Finally, the large color swatch in the CurrentColor button is updated, the proportional sliders are adjusted, and a rectangle is drawn around the new current color swatch.

The Proportional Sliders

There are three proportional slider objects. They are named Red, Green, and Blue. Each slider has two scripts, OnNewPosition and OnRelease, associated with it. OnNewPosition executes when the knob within a slider is moved. This is done by clicking on the knob and dragging it or clicking in the slider container to either side of the knob. The OnRelease script executes when the mouse button is released.

The OnNewPosition script determines the new position of the slider's knob. The sliders are set to vary from zero to 255 (Figure 5). This range corresponds directly with the RGB component values of the colors in the palette.

The size of a slider knob is adjustable. The knobs for the sliders on this card are set to a size of 10. Be aware that the actual maximum value that a slider can have is determined by the left side of the knob. Therefore, the actual maximum value for a slider is

```
Let I=0
Nop; Put color rectangles on the card
Nop; The color arrays used in the SetRGB command are assigned in
Nop; the GetColors routine
Loop
  SetRGB I,Red[I],Green[I],Blue[I]
  SetPen I
  AreaRectangle 20,15+5*I,280,5
  Let I=I+1
Until I>MaxColor
EndScript
BeforeDetachment ; used to be OnFinishup
Nop; Get new colors to use when this card is reattached
Do "GetColors"
EndScript
MessageFromSubDeck
Let Message=Arg1
If Message="Quit"
  ClosePendingWindow ;Close palette req before next command
  FirstCard ;Reattach card to show that colors are changed
EndIf
EndScript
Window "UserWindow"
Definition
  Origin 0,0
  Size 320,200
  Title "Colors"
  NumberOfColors 32,69632
  WindowColors 0,1,0 ; Detail, Block, Background
  WindowObjects CLOSEBUTTON
  WindowFlags ACTIVATE SEPARATESCREEN TOFRONT
EndScript
OnCloseButton
Quit
EndScript
EndObject
TextButton "ChangeColors"
Definition
  Origin 192,179
  Font "diamond",12 ; FontName, PointSize
  PrintStyle SHADOW,2,3 ; Style, Pen1, Pen2
  TextColors 1,0,NORMAL ; PenA, PenB, DrawMode
  Text "ChangeColors"
  Border BEVEL,2,1 ; BorderStyle, MainPen, ExtraPen
  Highlight COMPLEMENT
```

```
ButtonFlags NONE
EndScript
OnRelease
  LoadSubDeck "CanDo:Decks/ColorChange","CC"
  OpenRequester "CC","ChangePalette"
EndScript
EndObject
* End of Card "MainCard"
*****

*****
* Global routine "GetColors"
Let I=0
Loop
  SetRGB I,Red[I],Green[I],Blue[I]
  Let I=I+1
Until I>MaxColor
* End of routine "GetColors"
*****
```

Listing Two

Listing 2. ColorChange Deck

```
*****
* Deck "ColorChange"
* Time 01:15:43
* Date 01/23/94
*****

*****
* Card(s) in deck.
* Card "ChangePalette"
*****
* 1 Card(s), 1 were printed.
*****
```

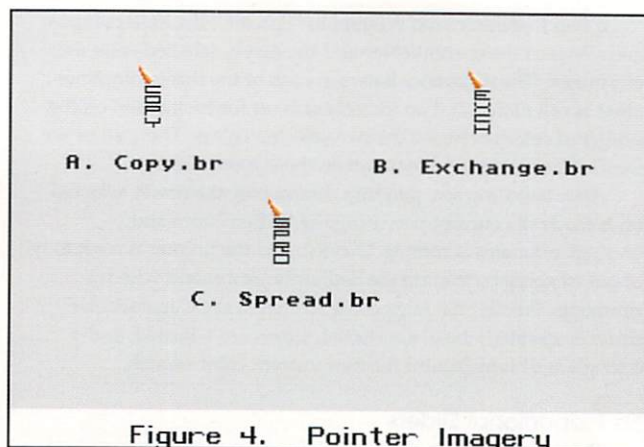



Figure 4. Pointer Imagery

Right-KnobSize+1 where Right and KnobSize are defined as shown in Figure 5. When the knob size is 10, the value of Right must be 264 for the maximum value of the slider to equal 255.

The position of a slider knob is determined with the GetPropPosition command. The OnNewPosition script uses this value to change the appropriate RGB component of the current color. Also, the slider value is printed to the right of the appropriate slider using the current color. This provides instant feedback of how the current color is changing with slider knob movement.

When the mouse button is released, the OnRelease script executes. It prints the final value of the slider. Also, just in case the slider was adjusted while a command was pending, PendingCommand is set equal to "None". Finally, the pointer's default imagery is restored.

The Restore Button

The Restore button is used to reset the color palette to its original colors when the card was activated. Its OnRelease script calls the ResetColors routine to accomplish this task. Also, PendingCommand is set equal to "None", and the pointer's default imagery is restored.

The OK Button

The OK button is used to accept the current palette with any changes that have been made and then exit the deck, returning control to the parent deck. Its OnRelease script sends a "Quit" message, using the SendToParentDeck command, to the parent deck and then quits.

The Cancel Button

The Cancel button is used to reject the current palette and then exit the deck, returning control to the parent deck. Its OnRelease script executes the ResetColors routine, sends a "Quit" message to the parent deck, and then quits.

Conclusion

I hope this installment helps you to better appreciate the power of CanDo. When I first conceived this program, I expected it to be quite involved. However, the more I coded, the more amazed I was at how easy it was to implement.

```
*****
* Natural order of Cards
* Card "ChangePalette"
*****

*****
* Global Routine(s) in deck.
* Routine "Box"
* Routine "GetColors"
* Routine "ResetColors"
* Routine "SetProps"
*****
* 4 Global routines(s), 4 were printed.
*****

*****
* Card "ChangePalette"
AfterAttachment ; used to be AfterStartup
Nop ; Get number of colors on screen and
Nop ; determine number of rows and columns for palette
Let MaxColor=WindowColors-1
Let NumRows=WindowColors%8
If NumRows=0
  Let NumRows=1
  Let NumCols=WindowColors
Else
  Let NumCols=8
EndIf
Nop ; Set upper left corner of palette area and
Nop ; the increment size between color blocks
Let StartX=100
Let StartY=17
Let IncX=80/NumCols
Let IncY=40/NumRows
Nop ; Loop to create rows and columns of the color palette
Let I=0
Let J=0
Let X=0
Let Y=0
Loop
  Loop
    SetPen I+J*NumCols
    AreaRectangle StartX+X,StartY+Y,IncX-1,IncY-1
    Let I=I+1
    Let X=X+IncX
  Until I=NumCols
  Let I=0
  Let J=J+1
  Let Y=Y+IncY
Until J=NumRows
Nop ; Set draw mode and print RGB beside the sliders
SetDrawMode JAM2
SetPen 1
PrintText "R",10,69
PrintText "G",10,79
PrintText "B",10,89
Nop ; Draw a rectangle around color 0
SetPen 0
Do "Box",1
Nop ; Set the sliders' positions for color 0
Do "SetProps"
Nop ; Get the screen's initial colors
Do "GetColors"
Nop ; No pending command when user clicks on palette
Let PendingCommand="None"
EndScript
Window "UserWindow"
Definition
  Origin 20,20
  Size 200,140
  Title "Change Palette"
  NumberOfColors 2,69632
  WindowColors 0,1,0 ; Detail, Block, Background
  WindowObjects CLOSEBUTTON DRAGBAR
  WindowFlags ACTIVATE TOPFRONT
EndScript
OnCloseButton
  SendToParentDeck "Quit"
  Quit
EndScript
EndObject
AreaButton "Palette"
Definition
  Origin 97,15
  Size 85,43
  Border DOUBLEBEVEL,2,1 ; BorderStyle, MainPen, ExtraPen
  Highlight NONE
  ButtonFlags NONE
EndScript
```

```
*****
* Natural order of Cards
* Card "ChangePalette"
*****

*****
* Global Routine(s) in deck.
* Routine "Box"
* Routine "GetColors"
* Routine "ResetColors"
* Routine "SetProps"
*****
* 4 Global routines(s), 4 were printed.
*****

*****
* Card "ChangePalette"
AfterAttachment ; used to be AfterStartup
Nop ; Get number of colors on screen and
Nop ; determine number of rows and columns for palette
Let MaxColor=WindowColors-1
Let NumRows=WindowColors%8
If NumRows=0
  Let NumRows=1
  Let NumCols=WindowColors
Else
  Let NumCols=8
EndIf
Nop ; Set upper left corner of palette area and
Nop ; the increment size between color blocks
Let StartX=100
Let StartY=17
Let IncX=80/NumCols
Let IncY=40/NumRows
Nop ; Loop to create rows and columns of the color palette
Let I=0
Let J=0
Let X=0
Let Y=0
Loop
  Loop
    SetPen I+J*NumCols
    AreaRectangle StartX+X,StartY+Y,IncX-1,IncY-1
    Let I=I+1
    Let X=X+IncX
  Until I=NumCols
  Let I=0
  Let J=J+1
  Let Y=Y+IncY
Until J=NumRows
Nop ; Set draw mode and print RGB beside the sliders
SetDrawMode JAM2
SetPen 1
PrintText "R",10,69
PrintText "G",10,79
PrintText "B",10,89
Nop ; Draw a rectangle around color 0
SetPen 0
Do "Box",1
Nop ; Set the sliders' positions for color 0
Do "SetProps"
Nop ; Get the screen's initial colors
Do "GetColors"
Nop ; No pending command when user clicks on palette
Let PendingCommand="None"
EndScript
Window "UserWindow"
Definition
  Origin 20,20
  Size 200,140
  Title "Change Palette"
  NumberOfColors 2,69632
  WindowColors 0,1,0 ; Detail, Block, Background
  WindowObjects CLOSEBUTTON DRAGBAR
  WindowFlags ACTIVATE TOPFRONT
EndScript
OnCloseButton
  SendToParentDeck "Quit"
  Quit
EndScript
EndObject
AreaButton "Palette"
Definition
  Origin 97,15
  Size 85,43
  Border DOUBLEBEVEL,2,1 ; BorderStyle, MainPen, ExtraPen
  Highlight NONE
  ButtonFlags NONE
EndScript
```



```

OnRelease
Do "Box",0 ;Un-highlight current color
Nop ;Determine newly selected color number
Let CurX=MouseX
Let CurY=MouseY
Let CurRow=Min((CurY-StartY)/IncY+1,NumRows)
Let CurCol=Min((CurX-StartX)/IncX+1,NumCols)
Let PenNum=8*(CurRow-1)+(CurCol-1)
Nop ;Get current pen's colors and handle pending commands
GetRGB PenA,Red,Green,Blue
If PendingCommand="Copy"
SetRGB PenNum,Red,Green,Blue
Elseif PendingCommand="Exchange"
GetRGB PenNum,Red2,Green2,Blue2
SetRGB PenA,Red2,Green2,Blue2
SetRGB PenNum,Red,Green,Blue
Elseif PendingCommand="Spread"
Let PenDiff=Abs(PenNum-PenA)
If PenDiff>1 ;Only do this if pen spread is 2 or more
Let StartPen=Min(PenA,PenNum) ;lowest pen number
Nop ;Make sure low pen in <color> and high in <color>2
If StartPen=PenA
GetRGB PenA,Red,Green,Blue
GetRGB PenNum,Red2,Green2,Blue2
Else
GetRGB PenNum,Red,Green,Blue
GetRGB PenA,Red2,Green2,Blue2
EndIf
Nop ;Determine the color diffs between adjacent pens
Let RedInc=(Red2-Red)/PenDiff
Let GreenInc=(Green2-Green)/PenDiff
Let BlueInc=(Blue2-Blue)/PenDiff
Nop ;Loop to set intermediate pen colors
Let CurPen=StartPen+1
While CurPen<=StartPen+PenDiff-1
Let NewRed=Red+(CurPen-StartPen)*RedInc
Let NewGreen=Green+(CurPen-StartPen)*GreenInc
Let NewBlue=Blue+(CurPen-StartPen)*BlueInc
SetRGB CurPen,NewRed,NewGreen,NewBlue
Let CurPen=CurPen+1
EndLoop
EndIf
EndIf
SetPen PenNum ;Now make current pen the selected pen
Nop ;Reset pending command and pointer
Let PendingCommand="None"
SetPointer
AreaRectangle 10,17,20,39 ;Update current pen box
Do "SetProps" ;Set the proportional objects' values for new pen
Do "Box",1 ;Highlight new pen color
EndScript
EndObject
AreaButton "CurrentColor"
Definition
Origin 8,15
Size 24,43
Border DOUBLEBEVEL,2,1 ; BorderStyle, MainPen, ExtraPen
Highlight NONE
ButtonFlags NONE
EndScript
EndObject
AreaProp "Red"
Definition
Origin 24,69
Size 140,8
MoveType HORIZONTAL
Range 0,264,1,10
VisibleRange 10,1
InitialPosition 0,1
PropBorder TRUE
EndScript
OnNewPosition
GetPropPosition "Red",NewPos
GetRGB PenA,Red,Green,Blue ;Get old color
SetRGB PenA,NewPos,Green,Blue ;Set new color
Nop ;Print new Red value using color PenA
PrintText FormatValue(NewPos,"000"),170,69
EndScript
OnRelease
Nop ;Print Red value using color 1
Let APen=PenA
SetPen 1
PrintText FormatValue(NewPos,"000"),170,69
SetPen APen
Nop ;In case this button was pressed after the Copy, Exchange,
Nop ; or Spread buttons, reset pending command and pointer
Let PendingCommand="None"
SetPointer
EndScript
EndObject
AreaProp "Green"
Definition
Origin 24,79
Size 140,8
MoveType HORIZONTAL

```

```

Range 0,264,1,10
VisibleRange 10,1
InitialPosition 0,1
PropBorder TRUE
EndScript
OnNewPosition
GetPropPosition "Green",NewPos
GetRGB PenA,Red,Green,Blue ;Get old color
SetRGB PenA,Red,NewPos,Blue ;Set new color
Nop ;Print the new Green value using color PenA
PrintText FormatValue(NewPos,"000"),170,79
EndScript
OnRelease
Nop ;Print new Green value using color 1
Let APen=PenA
SetPen 1
PrintText FormatValue(NewPos,"000"),170,79
SetPen APen
Nop ;In case this button was pressed after the Copy, Exchange,
Nop ; or Spread buttons, reset pending command and pointer
Let PendingCommand="None"
SetPointer
EndScript
EndObject
AreaProp "Blue"
Definition
Origin 24,89
Size 140,8
MoveType HORIZONTAL
Range 0,264,1,10
VisibleRange 10,1
InitialPosition 0,1
PropBorder TRUE
EndScript
OnNewPosition
GetPropPosition "Blue",NewPos
GetRGB PenA,Red,Green,Blue ;Get old color
SetRGB PenA,Red,Green,NewPos ;Set new color
Nop ;Print the new Blue value using color PenA
PrintText FormatValue(NewPos,"000"),170,89
EndScript
OnRelease
Nop ;Print Blue value using color 1
Let APen=PenA
SetPen 1
PrintText FormatValue(NewPos,"000"),170,89
SetPen APen
Nop ;In case this button was pressed after the Copy, Exchange,
Nop ; or Spread buttons, reset pending command and pointer
Let PendingCommand="None"
SetPointer
EndScript
EndObject
TextButton "Copy"
Definition
Origin 38,13
Font "topaz",8 ; FontName, PointSize
PrintStyle SHADOW,2,3 ; Style, Pen1, Pen2
TextColors 1,0,NORMAL ; PenA, PenB, DrawMode
Text " Copy "
Border BEVEL,2,1 ; BorderStyle, MainPen, ExtraPen
Highlight COMPLEMENT
ButtonFlags NONE
EndScript
OnRelease
Nop ;Turn on Copy pointer and assign pending command for
Nop ; the Palette button
SetPointer "CanDo:Brushes/Copy.br"
Let PendingCommand="Copy"
EndScript
EndObject
TextButton "Exchange"
Definition
Origin 38,31
Font "topaz",8 ; FontName, PointSize
PrintStyle SHADOW,2,3 ; Style, Pen1, Pen2
TextColors 1,0,NORMAL ; PenA, PenB, DrawMode
Text " Exch "
Border BEVEL,2,1 ; BorderStyle, MainPen, ExtraPen
Highlight COMPLEMENT
ButtonFlags NONE
EndScript
OnRelease
Nop ;Turn on the Exchange pointer and set the pending command
Nop ; for the Palette button
SetPointer "CanDo:Brushes/Exchange.br"
Let PendingCommand="Exchange"
EndScript
EndObject
TextButton "OK"
Definition
Origin 12,123
Font "topaz",8 ; FontName, PointSize
PrintStyle SHADOW,2,3 ; Style, Pen1, Pen2
TextColors 1,0,NORMAL ; PenA, PenB, DrawMode

```


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```
Text " OK "
Border BEVEL ,2,1 ; BorderStyle, MainPen, ExtraPen
Highlight COMPLEMENT
ButtonFlags NONE
EndScript
OnRelease
  SendToParentDeck "Quit" ;Let parent know we are quitting
  Quit
EndScript
EndObject
TextButton "Cancel"
Definition
  Origin 121,123
  Font "topaz",8 ; FontName, PointSize
  PrintStyle SHADOW ,2,3 ; Style, Pen1, Pen2
  TextColors 1,0,NORMAL ; PenA, PenB, DrawMode
  Text " Cancel "
  Border BEVEL ,2,1 ; BorderStyle, MainPen, ExtraPen
  Highlight COMPLEMENT
  ButtonFlags NONE
EndScript
OnRelease
  Do "ResetColors" ;Restore original colors
  SendToParentDeck "Quit" ;Let parent know we are quitting
  Quit
EndScript
EndObject
TextButton "Restore"
Definition
  Origin 64,104
  Font "topaz",8 ; FontName, PointSize
  PrintStyle SHADOW ,2,3 ; Style, Pen1, Pen2
  TextColors 1,0,NORMAL ; PenA, PenB, DrawMode
  Text " Restore "
  Border BEVEL ,2,1 ; BorderStyle, MainPen, ExtraPen
  Highlight COMPLEMENT
  ButtonFlags NONE
EndScript
OnRelease
  Do "ResetColors" ;Restore the original colors
  Nop ;In case this button was pressed after the Copy, Exchange,
  Nop ; or Spread buttons, reset pending command and pointer
  Let PendingCommand="None"
  SetPointer
```

```
EndScript
EndObject
TextButton "Spread"
Definition
  Origin 38,49
  Font "topaz",8 ; FontName, PointSize
  PrintStyle SHADOW ,2,3 ; Style, Pen1, Pen2
  TextColors 1,0,NORMAL ; PenA, PenB, DrawMode
  Text " Sprd "
  Border BEVEL ,2,1 ; BorderStyle, MainPen, ExtraPen
  Highlight COMPLEMENT
  ButtonFlags NONE
EndScript
OnRelease
  Nop ;Turn on the Spread pointer and set the pending command
  Nop ; for the Palette button
  SetPointer "CanDo:Brushes/Spread.br"
  Let PendingCommand="Spread"
EndScript
EndObject
* End of Card "ChangePalette"
*****
```

```
*****
* Global routine "Box"
Nop ;Determine the row and column of PenA
Let Row=PenA/8
Let Column=PenA/8
Nop ;Determine the top left corner for the highlight box
Let Top=StartY+Row*IncY-1
Let Left=StartX+Column*IncX-1
Nop ;Draw the highlight box using the pen number passed as
Nop ; an argument to this routine
Let APen=PenA
SetPen Arg1
DrawRectangle Left,Top,IncX+1,IncY+1
SetPen APen
* End of routine "Box"
*****
```

```
*****
* Global routine "GetColors"
Nop ;Loop to get all the RGB values for the pens
Let I=0
Loop
  GetRGB I,R[I],G[I],B[I]
  Let I=I+1
Until I>MaxColor
* End of routine "GetColors"
*****
```

```
*****
* Global routine "ResetColors"
Nop ;Loop to set all pen colors to original colors obtained
Nop ; in GetColors routine
Let I=0
Loop
  SetRGB I,R[I],G[I],B[I]
  Let I=I+1
Until I>MaxColor
Do "SetProps" ;Set the proportional objects' values
* End of routine "ResetColors"
*****
```

```
*****
* Global routine "SetProps"
Nop ;Get PenA's colors, print values, and set proportional
Nop ; objects' values accordingly
Let APen=PenA
SetPen 1
GetRGB APen,Red,Green,Blue
PrintText FormatValue(Red,"000"),170,69
PrintText FormatValue(Green,"000"),170,79
PrintText FormatValue(Blue,"000"),170,89
SetPropPosition "Red",Red
SetPropPosition "Blue",Blue
SetPropPosition "Green",Green
SetPen APen
* End of routine "SetProps"
*****
```

•AC•

Please Write to:
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Fall River, MA 02722-2140

Four Amiga Music Utilities You Should Be Aware Of

R. Shamms Mortier

Having written articles on most of the major Amiga music packages over time, I'm finding that a number of excellent secondary packages have tended to go unnoticed and unreported. One or more of the following programs might be just what you need to enhance your video/animation work, or as a needed utility to support your musical ventures on the Amiga.

- RiffGrabber
- EmTrax
- Mozart's Music Master
- KeyBang!

RiffGrabber 1.0

Do not pass this software up if you are an EA *DMusic* 2.0 user. It adds a process to *DMusic* that the program itself should have definitely considered for its 2.0 release, if not sooner. This is the capacity to record MIDI sequences that are quantized according to the needs of the player/composer, and not limited by mechanical quantizing that has to be severely edited on the notation screen.

"Quantizing" in electronic music gives the composer the ability to set the time values of input notation so that what appears on screen matches the composers desires. If you set the quantization at eight notes, for instance, you can peck away at the keyboard at whatever speed is comfortable for you, not worrying if some of the notes you play are of larger or shorter duration than eighth notes. The screen will interpret every keypress as an eighth note

regardless. That's OK when you plan to use notes of all one duration, or when you are planning to edit the time values later. It's not OK when you are a musician that thinks on your feet or an improviser, and you want the exact duration of the notes that

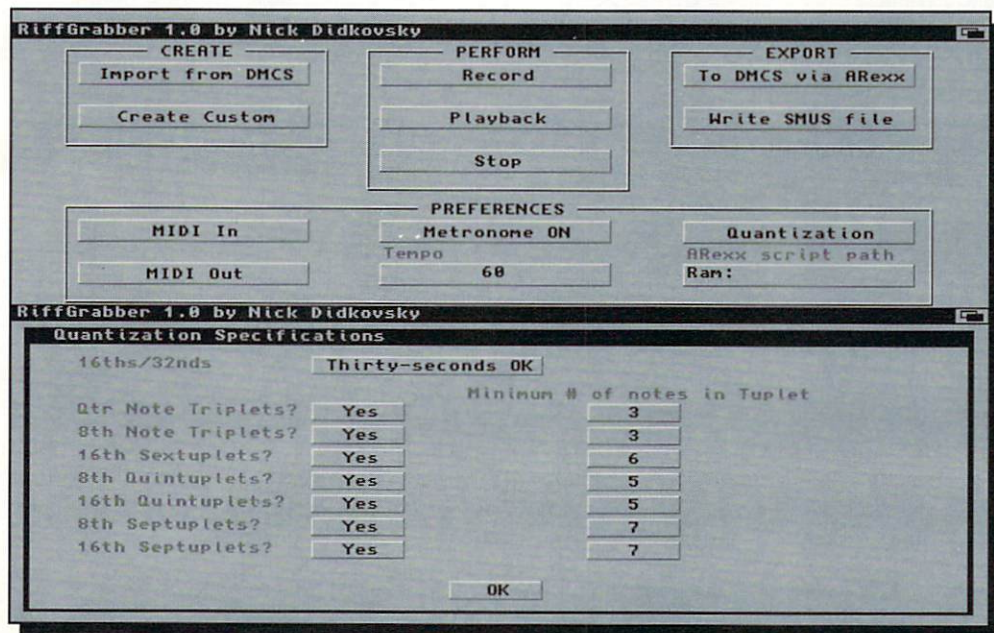


Figure 1. The RiffGrabber screens are deceptively simple as compared to the complexity of their purpose.

you're playing to be recorded to the sequence that appears on the screen. This means that if you allow a phrase to bleed over a timed bar-line, the program will not attempt to "correct" it for you, but will take it exactly as it is.

The *RiffGrabber* screens are extremely simple affairs, and you should need little explanation or reference to the manual to get things up and running, especially if you are an experienced DMusic user. The first *RiffGrabber* screen has a series of buttons that ask you to determine MIDI in/out channels, selected recording tempo, and whether the on-board metronome should be toggled on or off (this provides a "countdown" before playing commences). You can import a number of measures from DMusic to record to, and also send DMusic a sequence via its ARexx port (being sure to send the recording to a number of DMusic measures that are empty). A "Create" option allows you to select a number of measures and a time signature to record to.

The real magic of this software is on the Quantization screen. There, in addition to being able to quantize a sequence in any selected parameter, you can leave all or any selected number of possibilities on, getting a much more natural feel when the recording is done. The selections range from 16/32nd notes to a series of "tuplets": quarter and eighth triplets, sixteenth sextuplets, eighth and sixteenth quintuplets, and eighth and sixteenth septuplets. Any of these can have input as to the denominator of the temporal signature. Just as a MIDI quantizer, this is one of the best and most optional around.

Though I call this software a utility to DMusic, it can also be used as a stand-alone sequencer that records performances directly to a setup of blank measures of any time signature (Create Custom). Once recorded, you can save the sequence out to a SMUS file (meaning that in addition to DMusic, you can send the SMUS file out to *MusicX 2.0* or any other SMUS compatible program). The only thing I can think of adding is the capability to quantize in sixty-fourth notes in some future revision, because DMusic 2.0 addresses sixty-fourth notes.

EmTrax

If you are involved in producing soundtracks for video, then there is little doubt that this software will delight you. Its concept and operation is extremely simple. *EmTrax* is a series of four separate IFF sequence and soundfile libraries that loads into RAM when accessed. You can load in all four if you have enough memory. Once loaded, each of the samples is represented on-screen by a button. The beauty here is instant needed embellishment soundclips at your disposal. You can also get a recordable test tone by pressing "T" at any time.

All four libraries contain a whopping 176 sound effects, and they're split up to give you groups that are similar. The disks are distributed as QuarterBack archived files, and have to be decompressed using QB. The four modules consist of the Music Embellishment Library (ME), the Real World Fantasy (RWF), Real World Cartoon (RWC), and the Impact and Rude Noises. All of the sequences and samples are artfully recorded and extremely useful, some of the sequences lasting many seconds. What I like most is that you can click the mouse on as many samples as you want in any succession, and they will play exactly in that order. Many effects also loop very well when clicked more than once. It is to our fortune that the developer says that this is an expanding library. One suggestion I have for the future is to have one of the libraries be *One-Stop-Music-Shop* sequences ready to go. Wouldn't that be interesting? As it is, however, this is a qualitative production tool ready to go.

Mozart's Music Master

Teaching music theory and music appreciation classes is an art form in itself. I have done it for many years, and the deeper you go the more creative you have to become in the classroom. As a teaching aid, this small Amiga program is one of the most excellent learning tools I have ever seen, and, most importantly, heard. With this software, you can learn to read music notation in four different clefs, learn interval theory and ear training (I was embarrassed at my first scores), learn to identify the four standard scales (Major

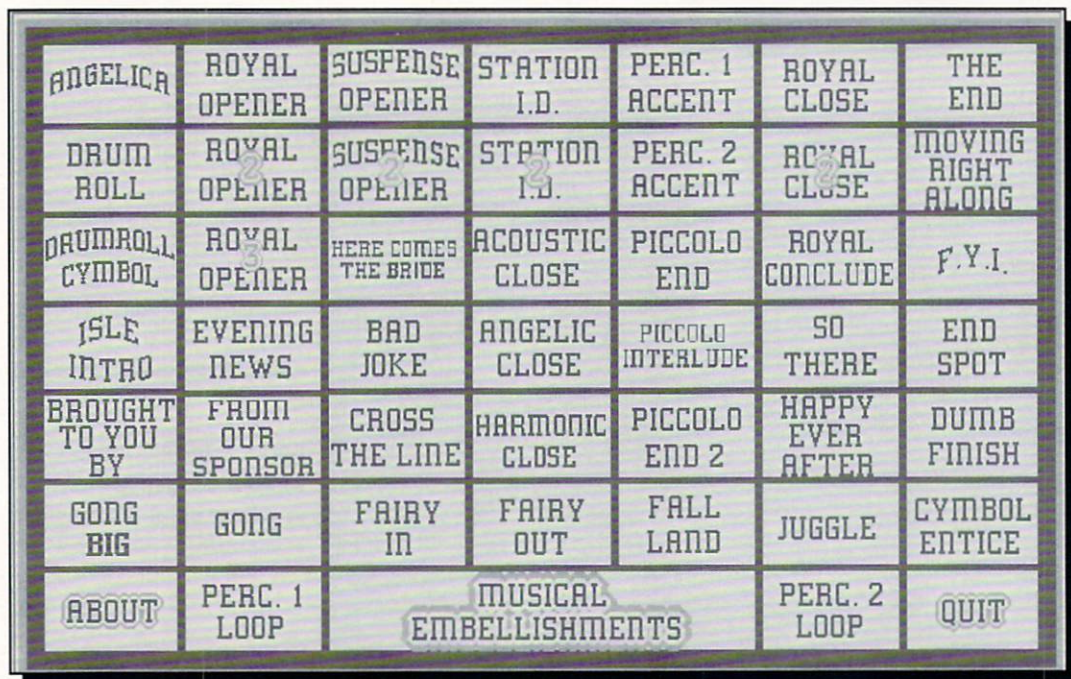


Figure 2. Here's one of the four EmTrax screens, bursting with usable sequences for video production.

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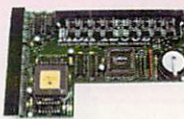
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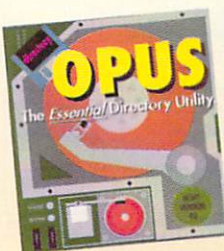
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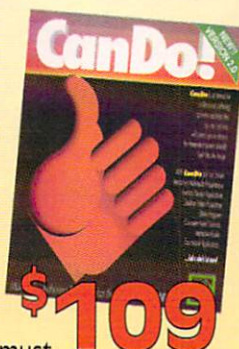
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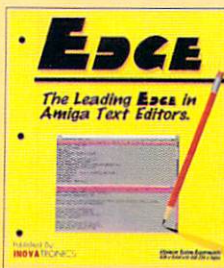
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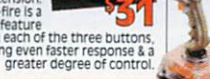
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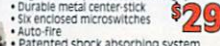
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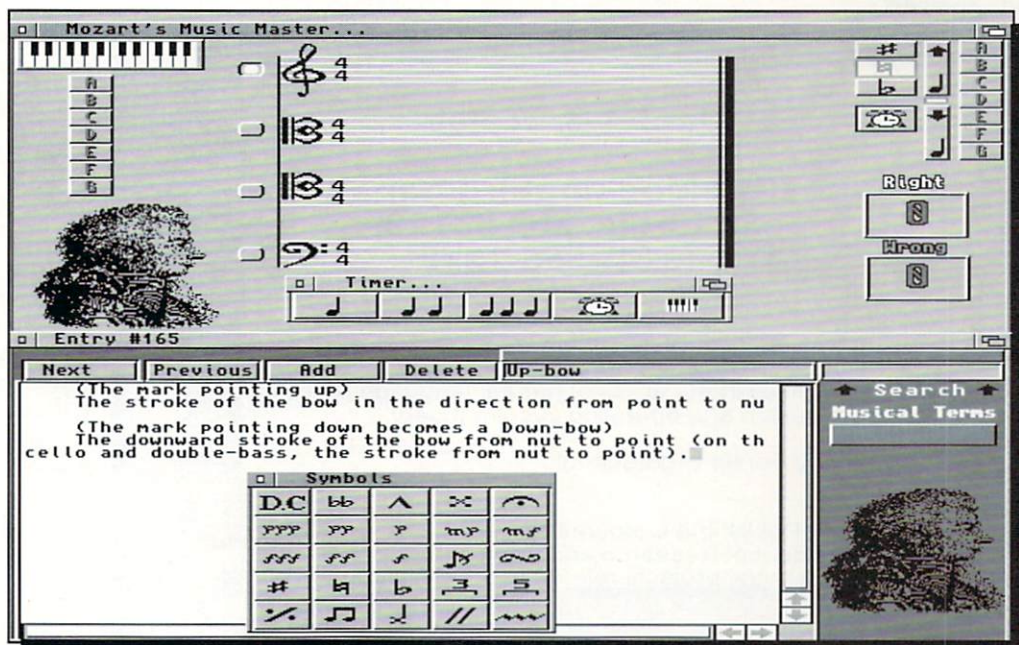
and three associated Minors), and have search access to a dictionary of graphic musical symbols. All of this is done completely interactively with well designed multimedia screens and attendant sound files. We are not speaking of beginner's level material here (though even beginners can learn a lot with this software), but tests and challenges suitable for graduate music students. Notes that are part of the testing system can be displayed above, on, or below any of the four chosen staves. If you're sure enough of your knowledge and brave, you can turn on the automatic timer as well. Just as in any game environment, your score appears on the screen. When you pick correctly, you are rewarded with a lovely sounding cello chord. When you make a mistake, a humorous voice says "oops! I didn't know my own strength." Helpful text can be displayed at any time. My only suggestion for a future sister product might be for "Coltrane's Music Master", a similar system that would encourage learning within the context of jazz (tetrachords and substitutes, blues and other jazz oriented scales, and rhythmical variations). A series of these programs dedicated to various world music styles would make an awesome multicultural teaching library, and might also be reworked into a CD³² disk. A very worthwhile teaching/learning tool.

KeyBang!

This is the simplest of the four packages we mention here, and its name tells all. If you have a toddler that is attracted to the computer but is too young to do more than poke a key here and there, then this is the software for you. Everytime any mouse button or keyboard key is depressed, a random picture together with a random sound (boings, bells, whistles, voices...) responds. The software is very customizable in that you can adjust the load paths by playing with the .info file. The developer promises that more sophisticated modules are due at a future date.

There is no way to multitask when this program is loaded, which is probably a smart idea (can you imagine your curious two year old suddenly gaining access to your hard drive?). Now if I were to purchase this software to entertain my two year old, I might consider buying another keyboard strictly for that purpose. After all, "banging" on the computer keyboard over a long period of time could cause some interesting anomalies the next time you load your high-end productivity software. This is definitely an idea that might introduce the computer to young children as a fun experience, so that later on they will be less likely to feel any anxiety

Figure 3. Two of Mozart's Music Master's screens are shown here. This software is meant for both classroom and home.



about using it. It's well worth thinking about purchasing. This software is the Amiga multimedia software with the youngest target audience that I could imagine. It could also be developed to include different levels of play and response, and might make another useful CD³² product.

•AC•

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Desktop Publishing for Profit

by Dan Weiss

Over the past issues we have looked at many ways of making money with desktop publishing. It truly is a business that Amiga users can get into with a relatively small investment and solid determination. The problem has been that no matter how determined you are, the world's economy has been in a bit of a slump. The worst part of this is that many people, possibly including yourself, have been caught in one of the "downsizings" going on where they work.

Surprisingly though, this may be the very key to getting your desktop publishing business going. The trick is that in order to get back into the job market, most people need a good resume. These are not easy things to write, and the competition for what is considered a good resume has become fierce. It used to be that a cleanly typed one page resume was the mark of a professional. This is not necessarily true now. Desktop publishing has become the critical hallmark of the new generation of resumes, simple word processing will not do.

All this leads to a stiff demand for people like you that can pull together the tools of the desktop publishing trade and create dynamite results. So let's dive in and look at the business of resumes and how to achieve job winning results.

The Business of Resume Writing

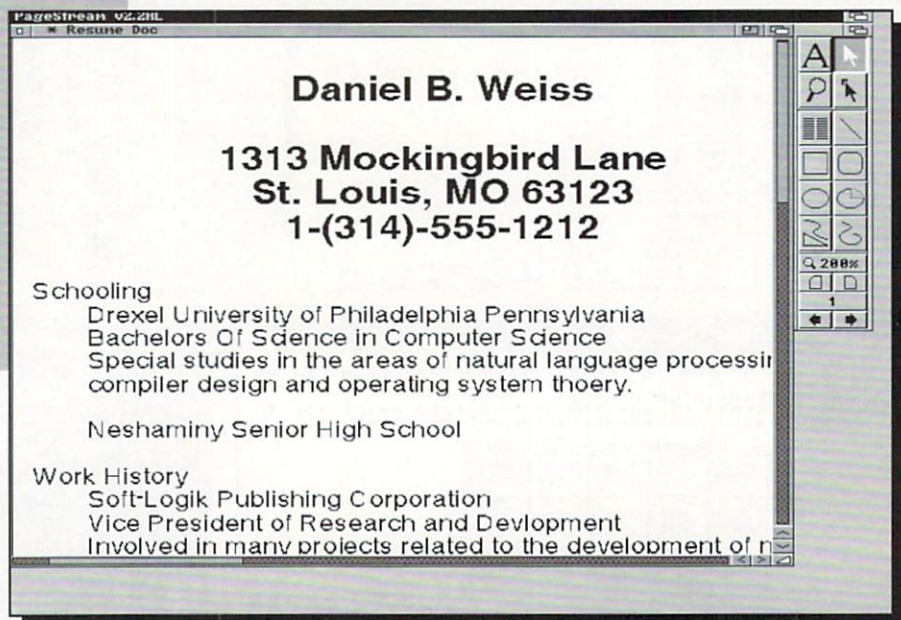
To research this article I went to the local quick copy chain store. There they do a booming business in resume preparation. The person I spoke to said that it was about 25% of all their desktop publishing business (interestingly enough, invitations, something we just looked at, makes up close to another 25% of their business). The going charge for just laying out a one page resume, getting a camera ready copy and the file on disk is thirty dollars. The second page is twenty dollars more and the third page is fifteen. A four page resume, such as the one we will create, would cost eighty dollars and you still don't have any copies of it to send out!

As you can see there is money to be made. The tools you need are the ones you already have if you do any desktop publishing; your computer, the publishing software, and a good printer. The printer part is crucial since so much is based on visual quality. If you do not have a PostScript printer, I would suggest that you create PostScript files of your documents

and go someplace that has a PostScript printer to print them. I know that this will eat into your profits, but quality is everything.

Keeping the customer satisfied

The first and most important thing to keep in mind is that more so than any other publishing project, your customer's job is really on the line here. The power of the resume you create can make the difference between getting or not getting an interview. Be sure to sit down with your customer (or yourself if you need a resume) and really look hard at what kind of resume is needed. These questions will help you know what information to emphasize. Some questions to ask are:



Resumé Designing: A Simple & Lucrative Way to Enter the Desktop Publishing Field

- 1.) How important is past experience versus past schooling?
- 2.) How important is it to have a listing of all previous jobs versus just the good ones?
- 3.) How conservative or liberal is the job market that I am trying to enter?
- 4.) How long have I been working in the field and is that an asset or a liability?
- 5.) How much of an asset or liability is my age?
- 6.) Do I have to worry about being under or over qualified?
- 7.) What do I want a perspective employer to know about previous jobs I have held?
- 8.) Do I have some solid references lined up?

That may seem to be a long list, but it is really only the most important questions. As time goes on you will find that there are many subtle questions you need to ask to get the best results.

Starting at the beginning you need the following information: Name, Current Address, Schooling, List of previous jobs, dates when they were held, positions held, and duties performed.

This is what makes the backbone of a resume. But, if you simply lay this all out in a boring straightforward one page manner, the resume will get lost in the stack with all the rest. I've been on both sides of the equation. I have seen my resume in a stack and I have tried to go through a stack. The boring ones are easy to ignore.

The last question you need to address before starting is how many pages do I want this resume to be? Many books will tell you that the resume should be a one page synopsis of your career and only exalted individuals should have more than one page. I think that is hogwash. I look at the size of a resume as a bell curve relating the stages of your career to the number of pages. When you first start out applying for your first job, you are hard pressed to fill a page, and when you have reached the "John Sculley" corporate CEO level, the need for a resume has diminished considerably. In between the need to toot your own horn is significant.

If you can do it nicely with text no less than 11 points (a very readable and compact size) and a font no more compact than Times-Roman, then stick to one page. If you have to leave things out and abbreviate the information, it's time to move up to four pages.

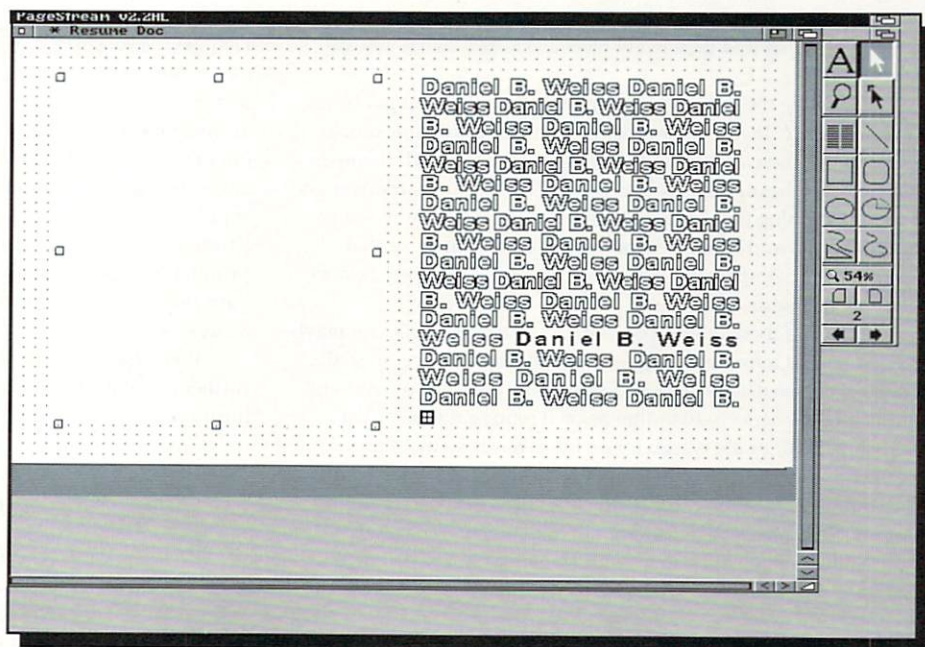
Four Pages

How do we make the leap from one to four pages? The jump comes from the simple fact that you want all of the resume read. It is an axiom that people don't look up, and that you can hide anything if you glue it to the ceiling. It is also an axiom that if you put something on the back, no one will read it. Logically adding a page to a one page resume would simply involve stapling the second page to the first, and many people do it that way. The problem is that the second page can easily become detached and lost. Along with that last page can go more than half your career.

The solution is not to copy the second page on the back of the first, as mentioned above this is sure death. Instead, copy the pages side by side on a piece of 11x17" paper. Then fold the paper down the middle and make an 8.5x11" brochure out of it. This kind of a layout is very easy to do even if you can only print out pages that are 8.5x11". Now you have created a resume that stands out in the stack.

The Four Page Layout

Start out by creating an 11x17" page with two columns, a one inch margin on all sides, and a one inch gutter. The important thing is to keep the design light and open so that the reader can quickly find what they are looking for. Too many resumes read like the fine print in a contract, dense and without any visual cues. Start by placing the clients name at the top of the left side of the page centered in the column. Place it in about 18 point type in the demi or bold weight of the font family you will be using. Remember the person's name is VERY important and should really stand out.



Follow the name with current address and phone information. This is the second most important piece of information. If they can't get a hold of you, they can't give you the job.

Next place the relevant non-career experience (schooling, training, and retraining) in chronological order with the place the experienced was gained left justified and the associated dates right justified. These are the most important pieces of information so be sure to have them clearly visible. They should also be in the demi or bold weight of the font and set at 12 or 13 points.

Points of Style

You may have noticed that I have not recommended underlining anything yet. This form of highlighting is a throwback to the days of typewriters when bolding was not possible. Using bolding gives the document a consistent feel and is better at calling attention to a given piece of information. But no matter how you feel about underlining never use all caps to call attention to information. This makes for a very unprofessional and unreadable line of text. Of course the usual rules of layout that we have covered here before apply, don't use more than one or two different fonts, be sure to use tabs instead of spaces for alignment, use the grid for placement of objects, and don't go too close to the edges in case the page gets copied.

The Works

Next comes the actual work experience. This is perhaps the most important information in the entire resume. There are two ways that you can approach the presentation of the jobs. The first is a traditional strict reverse chronological order listing. The most recent job you held (or your current job) followed by the next most recent and so on. This is what you will see in most if not all resumes. The second approach is more daring but puts your career in a better light. Choose the most relevant job, or the one you are proudest of and place it first. After all, the average reader may not get past the first or second job anyway. If you have relevant experience but it was farther back in your career it may get ignored. But be sure that you don't succumb to the urge of altering the dates when you rearrange your resume as this can be grounds for dismissal if you do get the job.

For each job list the title of the position you held, your normal duties, and special achievements or projects. Try to avoid jargon and phraseology specific to your field. While it is great to be able to speak the lingo, very often the personnel department is the first to read the resumes and they won't have a clue as to what you are saying.

Following the schooling and job history, what you put next is very subjective. If you are in a field where there are professional societies, list these and what offices you may have held. If you are in a field that has special courses or certifications (hazardous waste handling training for example) then list them at this point with a heading of "Awards and Certificates". If you received special awards like "Salesperson of the year" or "Special Bravery Award" place them here as well.

Finally, if there is still space, place some interesting, but maybe not job related information about yourself. For instance, special hobbies, personal achievements, or organizations can often round out what can be a very two-dimensional representation of you. Remember part of the reason for an interview is so that the perspective employer can get a chance to meet the person behind the resume. Who knows, the recipient of the resume may share your hobby or have been involved in the same organization. But don't put too much of this type of information in, only a few lines at most.

The last pieces of information to put on the resume are the references. These are very important, but you should not devote too much space to them. Simply give the name of the person and how they can be contacted. You may choose to leave them off the resume and simply put the line "References available upon request." Either way be sure that your references are good references. It is amazing how many people thought that their references would never be contacted and put down people who did not give a good opinion of the person. Avoid this mistake.

Shaping it all up

Well, you've typed it all in, and you've come up with a half a page too little or a page too much what do you do? In the case of too little, upgrade to 13 point and use a font that does not have tight letter spacing. To give you a feel for the letter spacing of your font, take a paragraph and set it in several different fonts all at the same point size. The smaller paragraphs have tighter letter spacing, the larger ones have looser spacing. Believe it or not, you can pick up a half a page just by increasing the point size and choosing a looser font over a page and a half of text. Don't push these tricks too far; 14 point type is too big for a resume, and the typeface "Hobo" is unprofessional.

In the case where the inside pages are not enough, feel free to spill over onto the back of the folder. Before I said that the back page is death, and generally it is, but we use it here because: 1) This is the last of the information and none of it (hopefully) is job history) and 2) The back page of a brochure gains more attention because of its uniqueness.

Up Front

We now need to address the front page. This will be the first thing the recipient sees. Whatever you place here, the name should be a key part of it. A basic design can feature the client's name along with a simple under or over accent line. An over line is what many news stations use when showing the name of the anchor or reporter. Another choice is to use a relevant piece of clip art printed at 10% gray to form a watermark like effect. In less conservative environments, you can be more creative, perhaps by creating a solid fill of the client's name repeated over and over again in outline form with only one occurrence filled in.

The final word

So now you have put the resume together, what do you do? First get it laser printed of course. Then get the resume copied onto nice resume paper. Some good papers to consider are referred to as laid bond. Also paper with a high cotton content looks very professional. Of course these papers cost more, but the effect is very important. Many of the recycled papers are popular right now, and depending on the job, you may score points by using recycled supplies. Be sure to get matching envelopes and paper for cover letters. Also be sure to offer a service to your client writing and printing cover letters using the same fonts as the resume. Remind your client that while your service may cost money, if it lands them a job, it is all worth it.

Well, that wraps up another project and hopefully puts you further down the trail of having your own desktop publishing business.

•AC•

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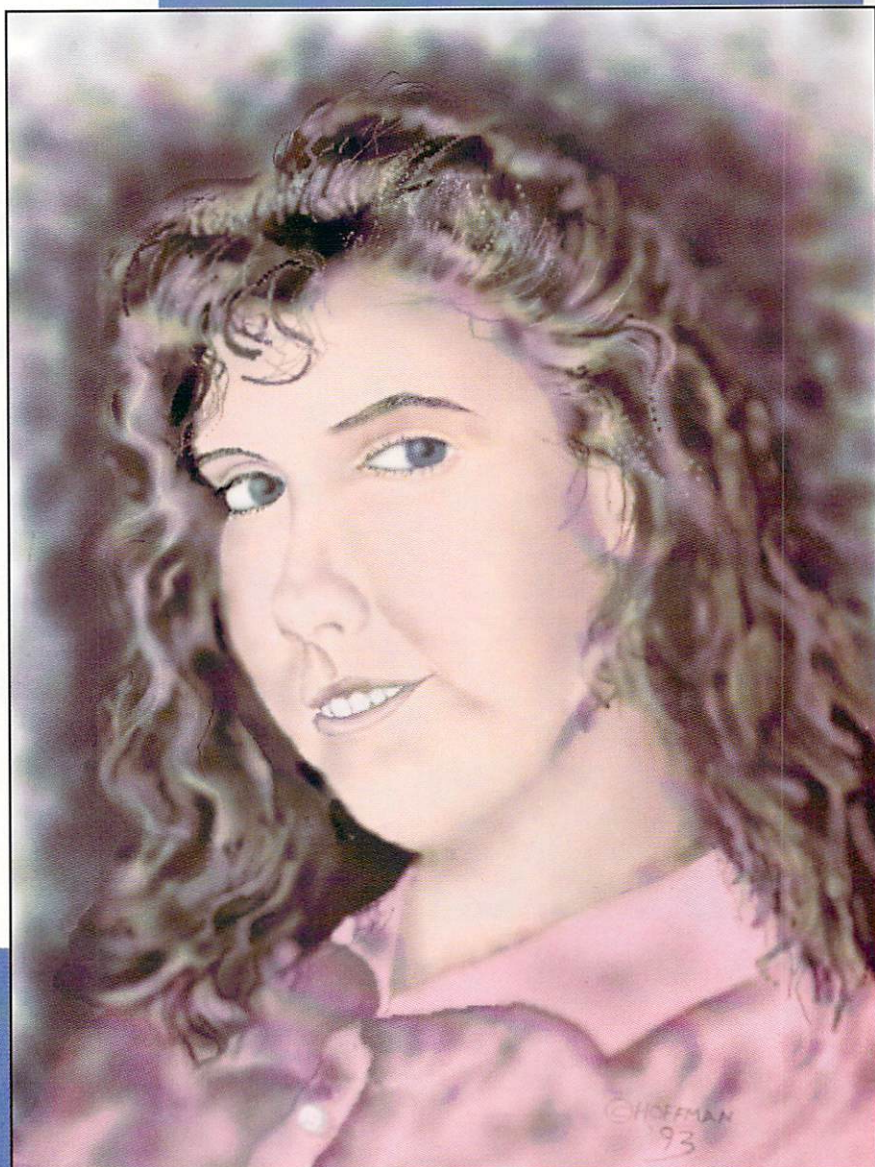
By Marc Hoffman

The way the computer can simulate real-world phenomenon is nothing short of incredible. People are programming computers to perform tasks that just a few years ago were unheard of. One of these simulations is the ability of the computer to mimic real-world painting, especially in the fine arts. Throughout this article, I will go through some of the basic steps of how I lay "paint" down on the computer screen and then how these steps can be applied in the painting of an actual finished picture. For this tutorial, I used EGS-PAINT, the painting software that comes bundled with the GVP Spectrum graphics card.

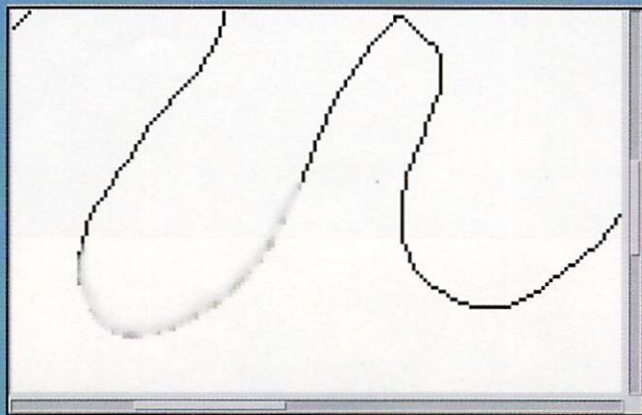
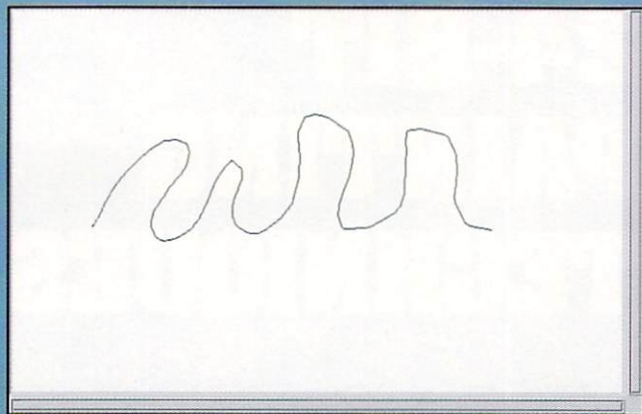
There are two basic kinds of techniques used in the making of "Rhonda," the piece that opens this article: one involves the blending method and the other involves the use of the airbrush. We shall look at each one of these techniques in turn.

Blending

The blending method is a rather simple yet powerful technique in the application of paint. I have found this little gem useful not only in my computer artwork, but also in my traditional artwork — especially watercolor. In its simplest form, it involves laying down a stark, opaque color or value; then, a blending algorithm is applied that makes the harshness less noticeable. This technique is useful in the anti-aliasing of lines and curves, but it can go much farther than that. If the afore-mentioned bold area is to act as a boundary layer between two different areas in the picture, then the blending technique can be used to separate the two areas much more dramatically. In the most dramatic



Right: This portrait, "Rhonda", was created using the techniques described by the author.



sense, blending just one side of the bold area can give the illusion of depth.

To illustrate this point, open a blank screen in a paint program. Next, using a small brush, draw a curvy "doodle" similar to the one in Figure 1. Now, enlarge the brush and select the blend or similar function in the paint program. Next, in order to get a really good view of the blending area, magnify two or three times and begin blending the inner area of the doodle. After some time, the doodle should start to look like a "cliff" or ledge between the left side of the screen and the right side, as shown in Figure 2. For even more dramatic effects, another doodle could be placed on the right side of the original doodle and blended out on the opposite side; this could give the impression of a plateau or upland area.

Airbrush

The second technique involves the use of the airbrush tool, and this application of paint can be equally as dramatic in creating areas of relief and elevation. To use the airbrush technique, simply start spraying the paint on the screen. Be careful, though, to select where the spraying occurs. Try to duplicate the results in Figure 3, where the picture tends to suggest "craters" or holes in the white background. Take time to experiment with these techniques, because they are used quite frequently in the next section.

Before explaining how I painted "Rhonda," I must stress that these techniques are in no way limited to the painting of portraiture, but can be applied to just about anything from the abstract to



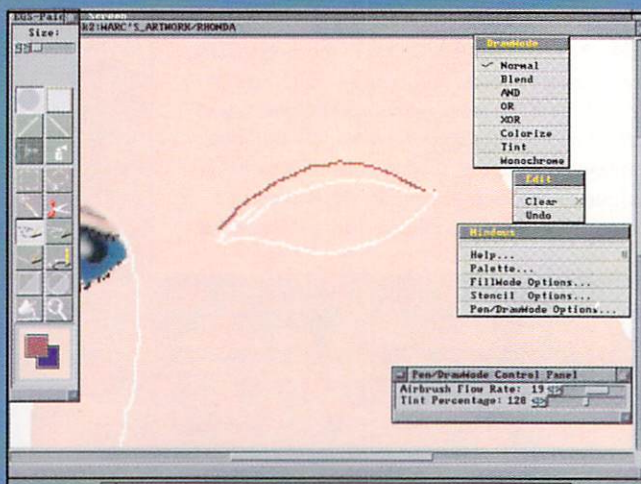
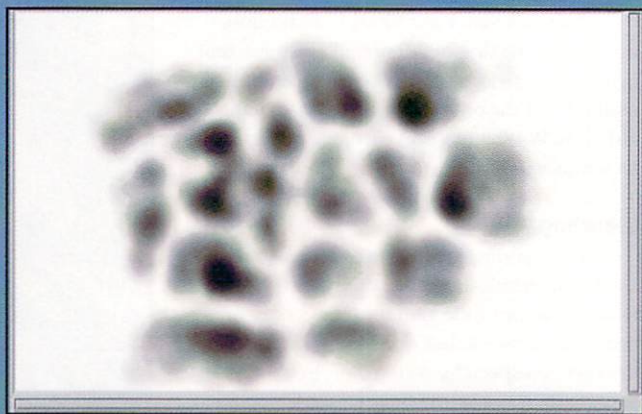
Top: Figure 1.

Above: Figure 2.

Right: Figure 3.

Left: Figure 4.

Bottom Right:
Figure 5.



the real. It is very important to see that these techniques are not "written in stone," but are tools to be applied in almost any circumstance.

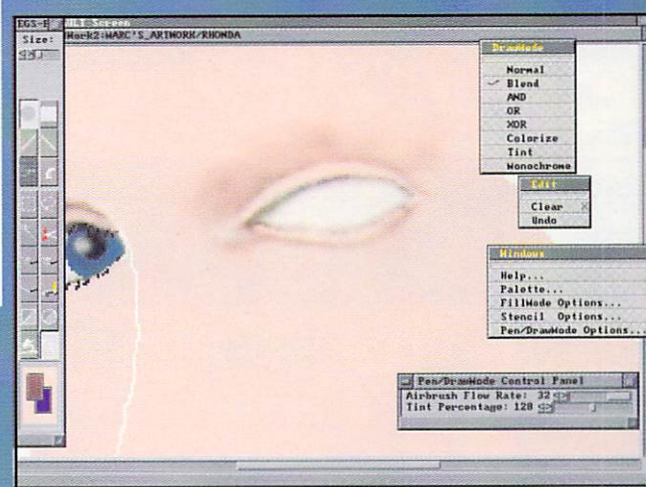
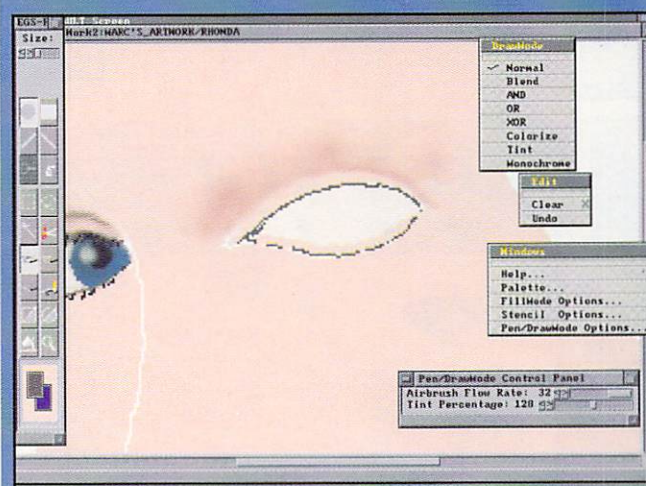
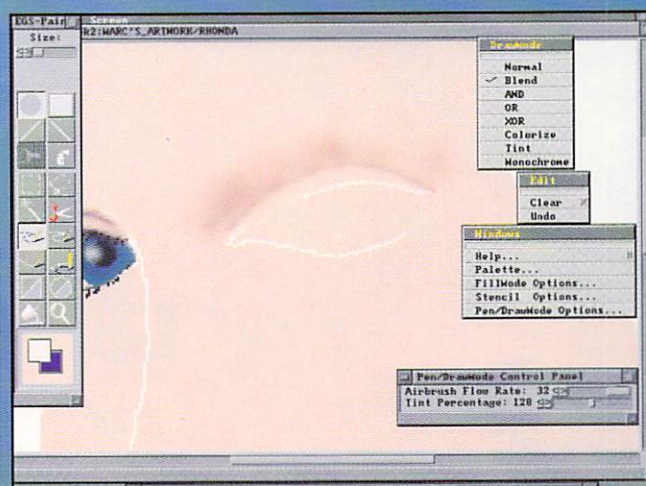
The Process

To start off, the painter must define the palette of colors that the picture will require. For "Rhonda," I used the palette shown in Figure 4. When I actually started to paint the picture, I blocked in a solid, flesh colored area, and lightly "sketched" in the major features of the face; e.g., the basic outlines of the eyes and nose. This is shown in detail in Figure 5, where I have enlarged the area around the eye. This is the point where the two painting techniques start to come in handy, as this eye area appears to look very flat and uninteresting. To make this eye stand out, I used a darker valued flesh color and traced around the outline of the upper eyelid using the normal or solid color painting mode, as is also shown in Figure 5.

The next step is to blend this area outward and upward to make the eyelid appear to have depth and form. To accomplish this, I used the blend function in EGS-Paint, just as in the above example. However, in EGS-Paint, the blending tool does not blend nearly enough for the effect needed here, and so I went to the second technique: the airbrush.

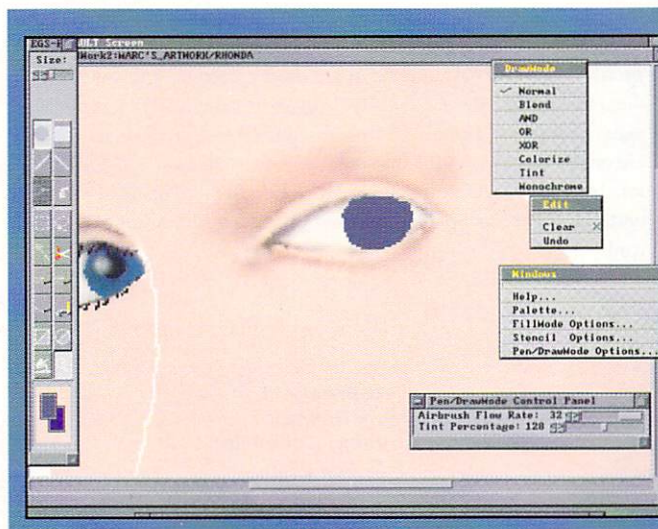
Using a similar value and a relatively large brush, I began spraying the area above the eye, being careful not to hit the actual eyelid. The reason for this is that the area just above the eye is a "receding plane," meaning that it does not catch the light that shines upon it, but instead lies in shadow. The eyelid, on the other hand, tends to behave as a protruding plane, which does catch the light. After performing these tasks, I filled in the eye with a very light flesh tone. The white of the eye is not really pure white, but a very light version of the flesh tone. I then traced the darker flesh value on the under side of the upper eyelid and around the bottom eyelid and blended them as well. These steps are shown in Figures 6, 7, and 8.

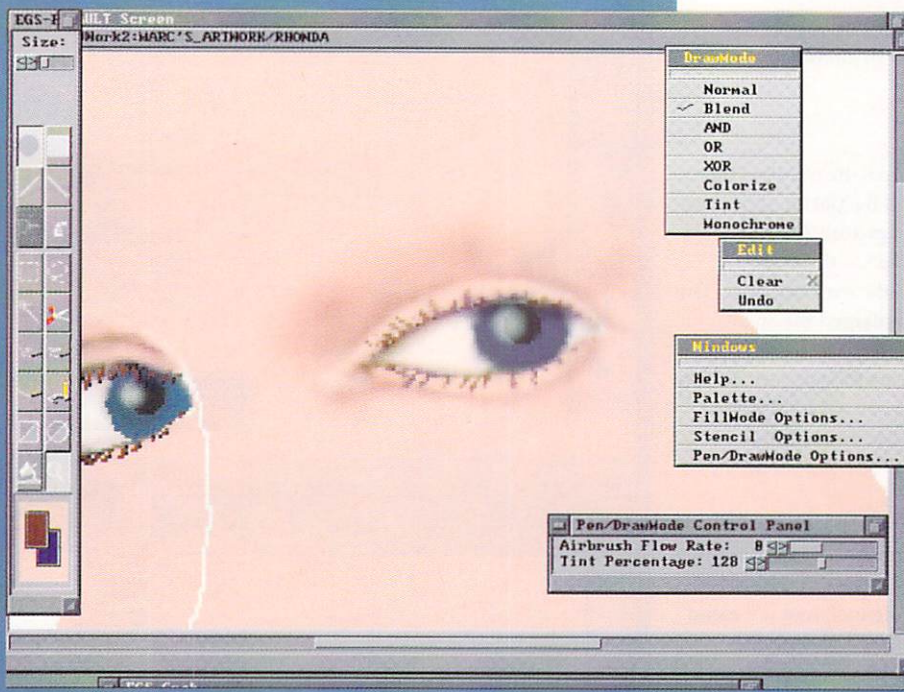
The next step is to place the iris in the area of the white of the eye. To accomplish this, I could have used the circle or ellipse tool; but because part of the iris is obscured by the eyelid, I chose to use the freehand tool. I used a value of blue, shown in Figure 9. However, this circle of blue does not look quite right. To fix this, I again went to the blending tool and applied it to the edges of the eyeball, to smooth out its jaggedness. I used a medium to large sized, round brush to place the pupil on the eye and blended this in a



Above: From top to bottom, Figure 6, Figure 7, and Figure 8.

Left: Figure 9.





Left: Figure 10.

Center: Figure 11.

Bottom: Figure 12.

similar fashion. Next, to simulate the slight shadow that the eyelid can cast on the eyeball, I returned to the normal solid painting mode and placed a rather dark value on the area between the bottom of the upper eyelid and the eyeball, and then blended this. To a smaller degree, I repeated the process for the bottom eyelid.

To create the slight highlight on the iris and pupil, I turned to the airbrush tool. I reduced its settings to about 60% and positioned the pointer right where I wanted the highlight to appear. I then carefully clicked about two to three times, so as to not apply too much paint.

I completed the eye by applying a darker value in normal painting mode for the eyelashes, later smoothing them out with the blending tool. These steps are illustrated in Figure 10.

The nose is painted using the same painting techniques, but in different ways and combinations. First, the nose is sketched in; second, the darker areas are painted in using solid color; third, these areas are blended out; and fourth, the airbrush is used to paint in areas of differing value and color. The beginning and end of these steps is shown in Figures 11 and 12. The rest of the painting was completed using, the same techniques described above, with some mixing of the two in the process.

Experimentation

Just some of the things that I find helpful in painting are variation and experimentation. For example, in EGS-Paint, the user can assign one color to the left mouse button and another color to the right button. By using this process, he or she can paint much more rapidly and spontaneously. If the color gets too dark in a specific area, then hit the other mouse button and lighten it up. If the reverse is true, then use the opposite mouse button to darken the area. Very smooth texturing can be achieved using this method. The second point, experimentation, is also very important. Paint programs are very unique among painting media—most of them have an “undo” feature. This feature alone practically begs for experimentation, because if the painter makes a mistake, so what? He or she can always hit that magical undo function and try again. It is by trying and failing and trying again that the artist becomes better at the trade. So go ahead and give it a whirl, and have some fun!

•AC•

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AReXX

by Merrill Callaway

What is Motion Blur?

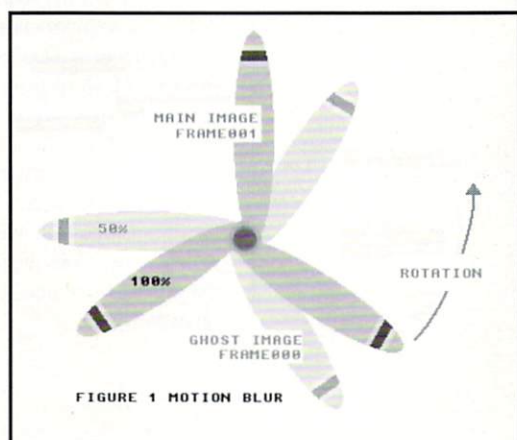
This month we feature a program sent in by Andrew M. Osiow from Foster City, California. He has written a program to approximate motion blur in animations. If you have ever photographed something that is moving too fast for the shutter speed of your camera, the resulting picture has "motion blur", a smearing of the object in the direction of its movement. The camera failed to "stop" the motion in sharp focus. You will witness the same type of blurring if you view one frame of a video or one frame of a movie of a moving object. Computer animations, mimic movies, except that each frame is a cartoon drawing instead of a photograph. If every frame is exactly sharp in an animation, however, some kinds of motion may appear inexplicably jerky. Where rapid motion is concerned, an animation can benefit if it mimics motion blur as it would be found in a movie. If we could mimic motion blur in our animations, then they would appear to run smoother at any given frame rate.

Evolving a Model for Motion Blur

Andrew's idea to model motion blur is simple, elegant, and easily done using *Art Department Professional* and ARexx. Andrew's original program loaded an animation frame in ADPro, then composited one or more of the next frames in sequence, starting at 50% mix and decreasing the mix proportionately. The composite of a frame with one or more "ghost frames" is intended to mimic the normal motion blur that would occur if this were a movie. Andrew put in features to allow you to pick how many frames to composite (2 or more); the ability to select the input/output formats; the directory to save to; and the option to specify the range of frames to blur. After experimenting with the program, I found one logical flaw that needed correcting, and a few technical errors, but by and large the listing here is what Andrew sent me.

An ARexx Program for ADPro to Create Motion Blur in Animations

My only problem with the logic was the sequence in which Andrew's original program loaded the frames. He started with frame 000, loaded it, and proceeded to composite frame 001 at 50% which gives each an equal weight. However, assuming the animation runs forward, the motion will be from frame 000 to 001. Compositing these two frames equally, does not convey the direction of motion. We need to load frame 001 first, insuring that none of its colors are transparent so that it will stand out. Then we need to composite frame 000 at 50% mix with the color zero transparent. This results in a sharp frame 001 with a ghost frame 000, which is the correct direction the blurring should take: backwards. In the case of compositing several frames, say three, we start with frame 002, and composite frame 001 at 50%, and frame 000 at 33%. I only had to change a few lines of code to accomplish this. All of my changes are noted in the listing.



How to Use the Program

Your animation frames must be in a directory with no other similarly named files. Andrew's naming convention is the same as DPaintIV's: filenameNNN where filename is the prefix and NNN is an integer number for the frame sequence. Launch ADPro. Start MotionBlur2.rexx from a shell. Select the input (Load) and output (Save) formats as the ADPro requesters come up. Next a file requester comes up. Select just one of the frame files. The program determines the frame prefix and range from this. I added a requester to let you input color zero (the one to make transparent for the "ghost" images. Next select the low number and the high number of the range of frames you want to blur from their respective ADPro requesters, followed by the number of frames you want to composite (the BlurFactor). Finally select an output directory (different from your input directory, as the output files have the same names as the input files!), and the program creates your new frames. You may then make them into an animation to see how they look, and if acceptable, copy them over the originals. You will come up a few frames short because of the compositing together of frames: one frame shy for BlurFactor of 2, two frames shy for BlurFactor=3, etc.

I think that the program is a good start to the technique of motion blurring. There is no reason you should not experiment with the blur operator, convolving, and the other operators to process your ghost images, before they are composited. You only have to add a line or two of code. You could use the Alpha channel to alter them beforehand, as well, or you could manually blur each new frame for a better effect. The illustration shows frames from an animation of a three bladed propeller with a BlurFactor of 2. One of them leaves the "ghost" image sharp and in the other, I manually blurred the "ghost" image in *Deluxe Paint IV*, using the Smear and Smooth functions. With motion blur, only three frames of animation give the impression of a whirling propeller. Remarkably, the sharp ghost images straight from the program seemed to give a better effect than a more "true to life" actual blurring of the image. Remember not to save your results over the originals until you are sure!

I don't think that this program ought to be used on a whole animation. Where it would really help is in making animbrushes which would then be added to the whole animation. Candle

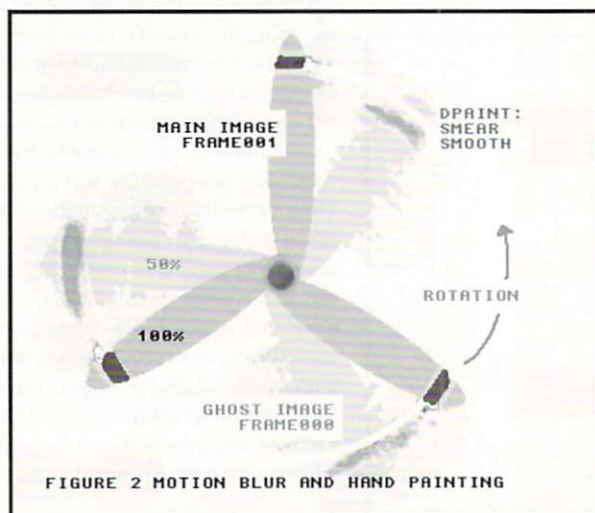
flames, bird or insect wings, running legs, and such movements are ideal subject for this treatment. Regular, rotating objects also benefit from the treatment. Don't forget that you can use ADPro's FRED (Frame Editor) to composite entire animations together, so you aren't just limited to animbrushes. The point is that the blurring program works best when you can make color zero (such as 0 0 0 black) transparent in the "ghost" images.

Notes About the Code

The program needs to read an entire directory, so it loads the rexxsupport library if it's not already listed. Andrew uses the pos() function to determine if it is in the list. A Position of zero means it's not there. I'd prefer to use "IF ~show('L',LibName) then ..." because it uses only one function instead of two. Next the program looks for ADPro, and if it's not running, the program quits. Try improving on the program to load ADPro if it is not running. ADPro is set up by specifying the ADDRESS "ADPro", PORTRAIT orientation, and unlocking the Palette. Next the program requests the user to specify the Load and Save formats. I substituted my own code here but included Andrew's /* commented out */ , because he does have some useful code for when you want just the file name from a directory with a complete path attached. He used the GetFile requester to find a loader and a saver, which works but it requires that extra code. The latest ADPro supplies two commands to obtain a user's choice from an internal list. The list is sent back with the selected entry in quotes as the first word in the string. We only have to parse it off to get our answer and we don't have to do all those string manipulations. GetList serves to return the string of loaders or savers, and ListView puts them into a requester from which to choose.

We need to get one of the animation frame files in order to determine the "prefix" in front of the number (format: prefixNNN where NNN is an integer, the frame number). We need to strip off the path from the file name, and Andrew does it by using the position of either "/" or ":" depending on what kind of path it is. He uses a LastPos() ARexx function to find the position in the string where the break should occur. He then gets a File name and a Path string. The little do loop originally had "i=1 to length(file)" as an additional iteration specifier, but that is superfluous. The While condition is sufficient to strip the numbers off the prefix.

The DirString assignment clause uses the rexxsupport function showdir() to get a string of all the files in the directory path. Andrew apparently doesn't like the ARexx Parse instruction, because he uses a Do loop to extract each word from the string. Andrew's code works, but uses two functions which execute slower than a parse instruction. In general, functions operate slower than instructions. Convince yourself that the first two lines may be rewritten as




```
Do while DirString ~= ''
Parse var DirString TestWord DirString
```

which accomplish the same thing as Andrew's code. Once in the loop, each file name in the directory is tested to see if the leftmost characters match the filename prefix. If it does, a comparison operator < or > is used to find the greater and the lesser of two strings (ARexx allows value comparisons of strings or numbers). After all files in the directory have been looked at, a LowNumber and a HighNumber are computed by stripping off the leftmost prefix characters leaving just a number. Andrew made a mistake here by trying to nest the DelStr() function inside a Strip() function. His intention was to remove leading 0's from the number. In ARexx you don't need to strip off leading 0's from numbers; ARexx will do it for you. Stripping off leading 0's from '000' results in the null string, and an improper default number in our ADPro number requester. The corrected lines are shown. I added the requester to get the RGB values for the transparent color and used a default 0 0 0 black. The program parses the ADPRO_RESULT into R G B which are used later. It would probably be a good idea to code some error checking and fall back values, here. We now select the range, the BlurFactor, and the output directory, all using ADPro requesters.

Andrew opens a console for program output, then proceeds to writeln() messages to it. He made a technical error in not using Call writeln(). His use of writeln() alone, causes error messages if you use WShell or run this program from an ARexx host application program. The Amiga Shell isn't an ARexx host, so Andrew didn't see the errors coming back. The kosher way to perform a function where you don't want the return value is to Call it.

New Sequencing

The Do Number loop iteration specifiers were rearranged by me to count differently from Andrew's original program as we mentioned before. Suppose we have 10 frames 000-009 and want to blur 3 at a time. The Do loop counts from LowNumber+BlurFactor-1 or 0+3-1=2 up to 9. So we load frame 2 (the third frame), and composite frame 1 and frame 0 behind it at 50% and 33% respectively. Because we start with groups of frames that are composited into one frame, the save frame number needs to keep track. My extra code with the amount to decrease (dec) and SaveFile are meant to save the result into a properly numbered frame. In our example above, we start with frame 002 and save into frame 000 if we have a BlurFactor of 3, and 000 as the low numbered frame.

After Andrew writes some lines to the console, we come to the Load command. I modified this too so no color is transparent and the first image of our set will appear brightest. That's what the -1 -1 -1 arguments are for. I modified the next Do loop as well, to take the next lower frames from our initial one and load them. We need to count both down AND up, because the lower the frame number, the greater the divisor of our CompositeFactor. I let the iteration specifier count up from 1 to dec or BlurFactor-1, and then subtracted this increasing number from Number to get the decreasing frame number n. The divisor becomes i+1 which yields the sequence 50%, 33%, 25%, etc. for the compositing amounts which use Andrew's internal procedure round() to calculate. When it comes time to load the composite, I added the 0 0 0 to mean that black is transparent and won't be composited. If the key frame is on a black background, the new frame's background will not

composite with the key frame image. My final modification was to change the Save "RAW" to save "IMAGE" so that I could see it on a normal screen. If you are making 24-bit animations, change this back to "RAW".

It would be fun to add some modules to do some operations on the "ghost" frames before compositing, but as it stands the program's simple approximation helps to give rapidly moving animated objects a realistic motion blur. Andrew has some good ideas, and his approach to ARexx programming showcases some of the incredible power of ARexx to manipulate strings. Keep up the good work Andrew, and thanks for sharing your program with us!

Listing

```
/*
**      MotionBlur:
**
**      Uses ADPro to produce a new series of animation frames, where each
**      new frame (n) is a 50/50 composite of the frames n and n-1. The
**      end result is a series of frames one shorter than the original.
**      The user may specify the output directory.
**      The last frame of the old series is not deleted, and it is up the
**      user to realize that this frame has no motion blur if the userchooses
**      to overwrite the original frames (not recommended!).
**      The program only requires the user to input one file from the
**      image directory containing frames of the animation which MUST be in
**      the format fileprefixNNN where NNN is an integer. The user can also
**      limit the range, or specify what file format to use for input and
**      output. All valid frames will be processed in ascending order.
**
**      By Andrew M. Osio © 1992 Second Sight
**      Modified by Merrill Callaway, 1994 as noted.
*/

OPTIONS RESULTS

ADDRESS "ADPro"

NL = '0A'X
LibName = "rexxsupport.library"

if pos('ADPro',show(ports))=0 then do
say "ADPro has not been found."
exit
end

if pos(LibName , show('Libraries')) = 0 then addlib(LibName , 0 , -30 , 0)
if pos(LibName , show('Libraries')) = 0 then do
OKAY1 "Could Not Add The Rexx Support Library"
exit
end

ADPRO_TO_FRONT

ORIENTATION "PORTRAIT"
PSTATUS "UNLOCKED"

/* 12 lines by M. Callaway
** ListView is much cleaner than GetFile
** when you want the user to choose
** from an internal list. You don't have
** to delete the path from the file name.
*/
GETLIST LOADERS
list=ADPRO_RESULT
LISTVIEW "Select Loader" 10 sort items list
IF RC ~= 0 then exit
PARSE VAR ADPRO_RESULT lstring .
LFORMAT lstring

GETLIST SAVERS
list=ADPRO_RESULT
LISTVIEW "Select Saver" 10 sort items list
IF RC ~= 0 then exit
PARSE VAR ADPRO_RESULT sstring .
SFORMAT sstring

/* Original code commented out...
```



```

LFORMAT
GETFILE "Select Load Format." "ADPRO:Loaders2" ADPRO_RESULT
if RC = 0 then exit
LFormatType = ADPRO_RESULT
Position = lastpos("/",LFormatType)
if Position = 0 then Position = lastpos(":",LFormatType)
LFormatType = right(LFormatType,Length(LFormatType)-Position)
LFORMAT LFormatType

SFORMAT
GETFILE "Select Save Format." "ADPRO:Savers2" ADPRO_RESULT
if RC = 0 then exit
SFormatType = ADPRO_RESULT
Position = lastpos("/",SFormatType)
if Position = 0 then Position = lastpos(":",SFormatType)
SFormatType = right(SFormatType,Length(SFormatType)-Position)
SFORMAT SFormatType
finish of original code commented out */

GETFILE "Select a file from the directory"
if RC = 0 then exit
FilePath = ADPRO_RESULT
Position = lastpos("/",FilePath)
if Position = 0 then Position = lastpos(":",FilePath)
Path = left(FilePath,Position)
File = delstr(FilePath,1,length(Path))
Prefix = File
Lowest = File
Highest = File
/* 1 line by M. Callaway */
do while datatype(right(Prefix,1)) = NUM
    Prefix = left(Prefix,length(Prefix)-1)
end

DirString = showdir(Path,'f')

/* 2 lines by M. Callaway */
DO WHILE DirString = ''
    PARSE VAR DirString TestWord DirString

/* original code commented out...
do Number = 1 to words(DirString)
    TestWord = word(DirString,Number)
commented out... */

    if left(TestWord,length(Prefix)) = Prefix then do
        if TestWord < Lowest then Lowest = TestWord
        if TestWord > Highest then Highest = TestWord
    end
end

/* 4 lines modified by M. Callaway */
LowNumber = DelStr(Lowest,1,length(Prefix))
HighNumber = DelStr(Highest,1,length(Prefix))
GETSTRING "R G B for Color 0" "0 0 0"
PARSE VAR ADPRO_RESULT R G B

GETNUMBER "Low # in the range:" LowNumber LowNumber HighNumber
IF RC = 0 THEN EXIT
LowNumber = ADPRO_RESULT
GETNUMBER "High # in the range:" HighNumber LowNumber HighNumber
IF RC = 0 THEN EXIT
HighNumber = ADPRO_RESULT
Maximum=HighNumber-LowNumber+1
GETNUMBER "Number of Blurs/frame:" 2 2 Maximum
IF RC = 0 THEN EXIT
BlurFactor = ADPRO_RESULT

GETDIR "Select OutPut directory" Path
if RC = 0 then exit
OutPath = ADPRO_RESULT
OutPath = strip(OutPath)
if (right(OutPath,1) = ":") & (right(OutPath,1) = "/")
    then OutPath = OutPath || "/"

ADPRO_TO_BACK
if - open('console',,,
'con:296/70/326/121/MotionBlur by Second Sight ©1992/NOSIZE','W')
then exit 20

/* 6 lines modified by M. Callaway */
Call writeln('console',"MotionBlur online.")
Call writeln('console',"Load Format is " || LFormatType || ".")
Call writeln('console',"Save Format is " || SFormatType || ".")
Call writeln('console',"Range : " || LowNumber || " - " || HighNumber ||
".")
Call writeln('console',"Input directory is " || Path)
Call writeln('console',"Output directory is " || OutPath)

/* 1 line by M. Callaway */
do Number = LowNumber+BlurFactor-1 to HighNumber
    ImageFile = Prefix || right(Number,3,'0')

```

```

/* 2 lines modified by M. Callaway */
dec=BlurFactor-1
SaveFile = Prefix || right(Number-dec,3,'0')

if exists(Path || ImageFile) then do
    Call writeln('console'," ")
    Call writeln('console',"Loading " || ImageFile || ".")
    address "ADPro"
    ADPRO_TO_FRONT

/* 1 line modified by M. Callaway */
LOAD Path || ImageFile 0 0 100 -1 -1 -1

if RC = 0 then do
    OKAY1 "Could Not Load" Path || ImageFile
    exit
end

/* 4 lines modified by M. Callaway */
do i=1 to dec
    n=Number-i
    NextImage = Prefix || right(n,3,'0')
    CompositeFactor = round(100/(i+1))

    Stuff = "Composing " || NextImage || " at " || CompositeFactor ||
    "%."

/* 1 line added by M. Callaway */
    ADPRO_TO_BACK

/* 1 line modified by M. Callaway */
    Call writeln('console',Stuff)

/* 1 line modified by M. Callaway R G B is color 0 */
    LOAD Path || NextImage 0 0 CompositeFactor R G B

if RC = 0 then do
    OKAY1 "Could Not Load" Path || ImageFile
    exit
end
EXECUTE
ADPRO_DISPLAY
PAUSE 50
ADPRO_UNDISPLAY

/* 2 lines modified by M. Callaway */
FileString = OutPath || SaveFile
SAVE FileString "IMAGE" /* change to "RAW" if this is 24-bit */

if RC = 0 then do
    OKAY1 "Could Not Save" FileString
    exit
end
ADPRO_TO_BACK

/* 1 line modified by M. Callaway */
Call writeln('console',ImageFile || " is Blurred.")
Call writeln('console',"Saved as " || SaveFile)
end
end

address "ADPro"
ADPRO_TO_FRONT
Okay2 "Exit ArtDept?"
if RC = 0 then ADPRO_EXIT
exit

round: procedure
parse arg number
number=trunc(number*10)
if right(number,1) > 4 then number = number + 5
number=number%10
return number

```

•AC•

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Deluxe Music 2.0

by R. Shamms Mortier

For all the users and fans over the years who have waited patiently for Electronic Arts to upgrade their premier music composition and sample playing program for the Amiga, the wait is over. Instead of a simple upgrade to an already useful product, *Deluxe Music 2.0* has been redesigned from the ground up by the Amiga author who created MicroIllusions' *MusicX* many years ago, David Joiner.

A Walk through the Sound Gates

As is always the case with Electronic Arts documentation, the DMusic manual is clear and thorough, containing extensive tutorials, references, and appendices. For new users, the tutorials walk you through every aspect of the program. Vintage DMusic users, however, will find that they need little preparation before charging ahead at full steam. The method of addressing the *One Stop Music Shop* is rather complex, and an accompanying manual addendum lists the process very clearly.

Notes can be entered in a score in a number of ways: by opening a previously saved score (newer DMusic 2.0 CMUS scores, MusicX scores, SMUS scores, older DMCS scores, as well as MIDI files); by dragging notes, rests, and other accidentals onto the staves; by entering notes and/or chords from the on-screen keyboard; or by entering them from an attached MIDI keyboard (with MIDI active). Once the notes are on the screen, they can be moved and altered by clicking/dragging and using the myriad of menu options available. Saving your work gives you the choice of CMUS, MIDI, or SMUS with or without embedding the actual samples in the file.

One of the new features that I really enjoy as a way of teaching students about the complexities of Western music is the "Set Key Signature" menu. This baby is all new and all neat! It has a circle-of-fifths diagram on the side. When you click on

one of the key signature areas, it lights up and displays the actual key signature on an associated staff. Wherever you have placed the arrow cursor in the score is where the new key signature will be added.

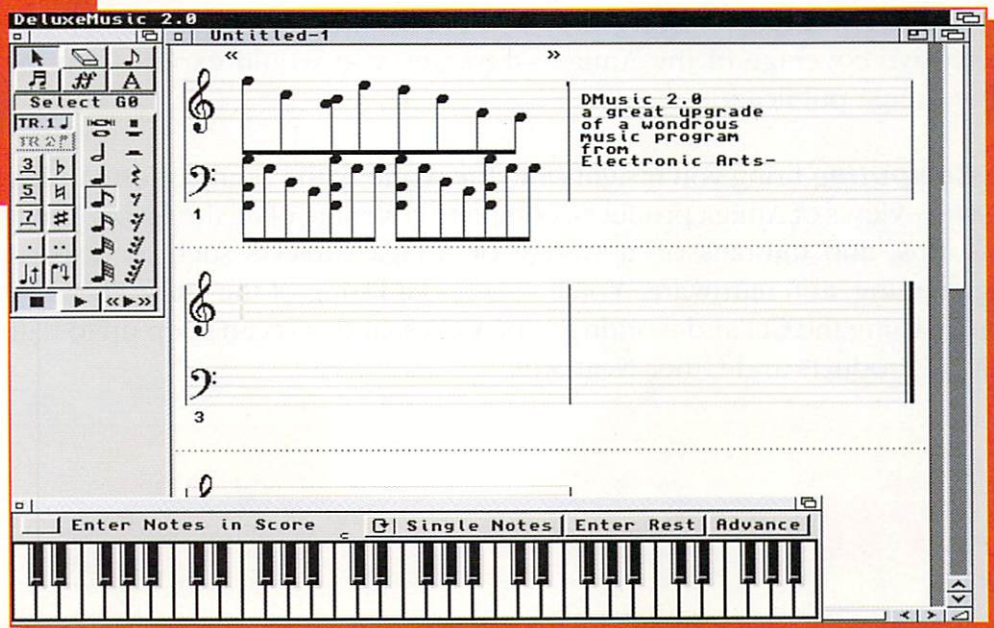


Figure 1. The new DMusic 2.0 interface has an expanded toolbox and all-around new look from its predecessor. An easy to use menu allows you to work in a variety of screen modes. This is 8-color Hi-Res Interface.

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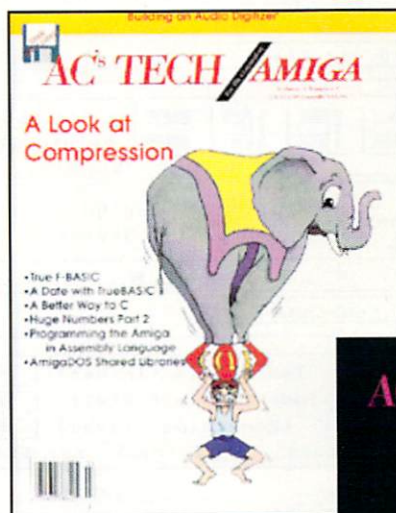
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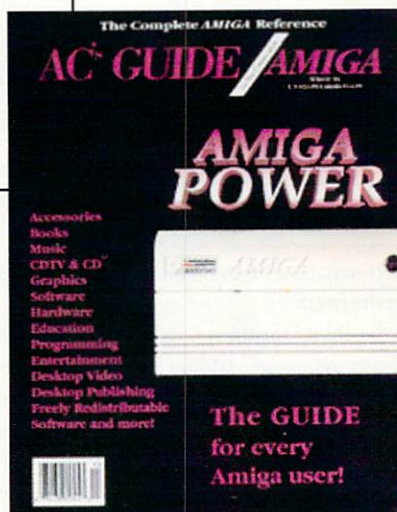
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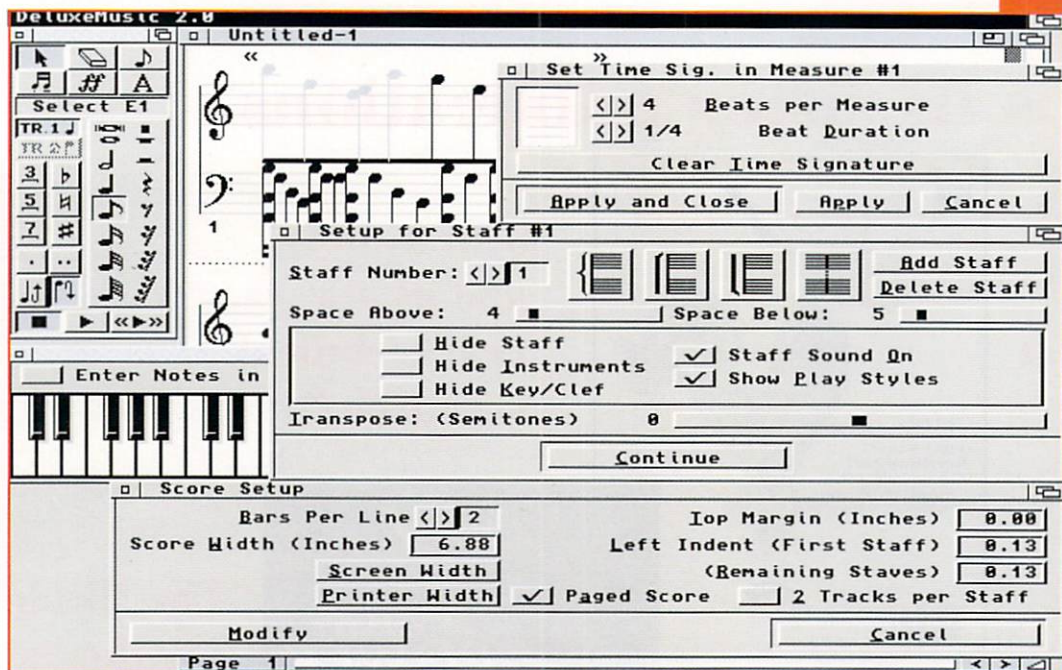
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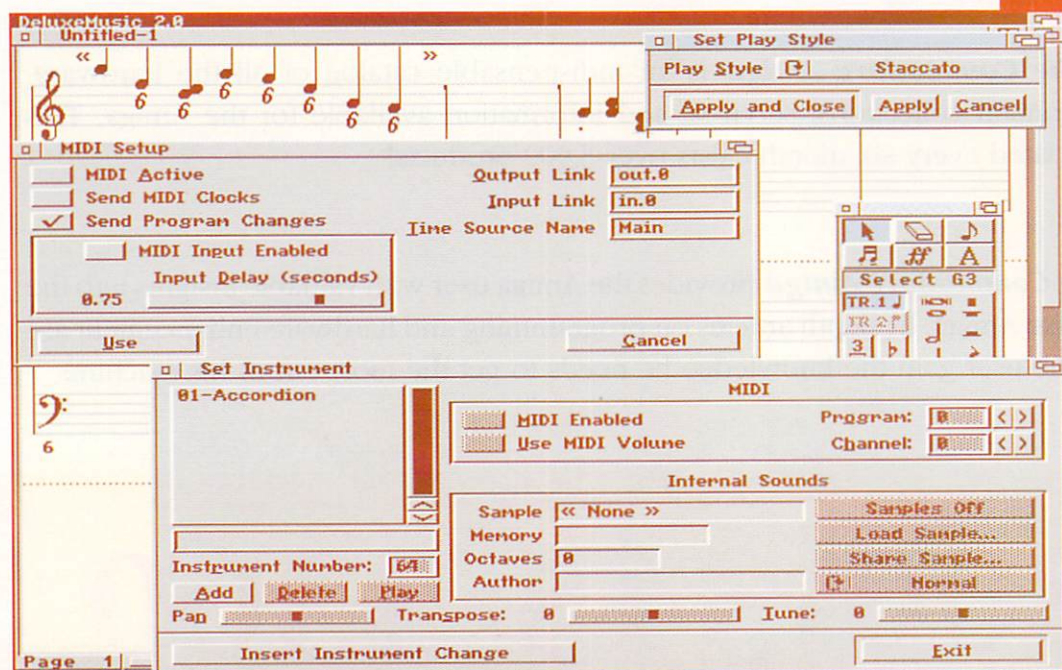
1-800-345-3360



Left: Figure 2. In Hi-Res Interlace, you can open as many menus as you desire on the same DMusic screen. Of course, managing all of the data while creating a composition can be a visual challenge.

You can apply it either up or down. Like other menus, you can leave this one on the screen to interact with as you discover the need.

Another new feature is the ability to add space to the on-screen score by "Space Above/Space Below" settings in the Staff Setup requester. Adding space above and/or below a staff is vital when the score contains bunches of hard to read notation, or when the notes jump octaves and more in a radical fashion. As you move these space sliders, you can see the score change accordingly. This requester itself is class-A designed, allowing multiple staves to be bracketed in four alternate ways. You can show or hide (for viewing and printing) the key signature, the instrument names, the Play Style numbers, or the entire staff. You can also select to toggle the sound on or off. The design of this menu alone deserves an award, and will doubtless garner the praise of many an electronic musician.



Left: Figure 3. A new MIDI menu allows you to set the necessary MIDI parameters. The "Set Play Style" menu has a new controller that walks you through all of the possibilities while easily interfacing with selected notes. The numbers attached to the notes here indicate the number of the Play-Style settings so you can see what they are at a glance for editing.

DMusic "Macro"mania

Not to be left behind in the rush of Amiga programs of every sort to include an ARexx port, DMusic 2.0 includes a module that allows you to incorporate ARexx scripts and assign them to function keys as Macros. Obviously, you have to have ARexx installed on your system, and it must be up and running to take advantage of this new DMusic capability. In addition to allowing you to assign any of the ARexx scripts on-board to a macro key (scripts that allow you to add or delete a measure at the touch of a function key for instance), DMusic's macro options are much deeper and extensive. You can, for example, turn Macro Recording on, perform a series of operations, and then turn recording off and save the actions you just recorded to disk. Next, you use an "assign Macro" command to glue the Macro to one of the ten function keys. Now every time you press that function key, the whole series of operations you recorded is repeated again in the score. The only problem is that DMusic should allow for more than ten Macro scripts (ten is the number of function keys on the keyboard). This operation is so useful for composers that I would hope that a fairly quick upgrade will at least allow for Shifted Function assignments, so that the number of possible Macros is increased to twenty. Other additional key configurations would allow even more Macros in the future. You can't have too much of a great thing.

Changing Fonts

You can alter the fonts that DMusic uses in two separate and important ways. By selecting the "Display Settings" (the place where the screen resolution is changed and/or set) you can alter the screen fonts used in all of DMusic's menus. This makes the screens variable according to need. Users with vision problems, for instance, might benefit by using a larger type size, especially necessary when working on a Hi-Res interlaced screen. Even more importantly, you can change the style and size of the type used to indicate lyrics and other needed markings in your composition. When you click on the letter icon, a moveable box where your text is to be placed appears on the screen. In addition, a separate icon section appears in the toolbox allowing you to change the default font, make the type bold, underlined, or italicized.

If you plan to print out your score, I would suggest that you always use one of the CG fonts, since they will appear far less jaggy when the composition is printed. I had trouble getting DMusic to address my PostScript printing capabilities, and spent some time speaking with an EA representative about this. He informed me that DMusic works best when booted from a non-hard drive Workbench. I did get this to work, but only after making a separate copy of DMusic to floppies and booting from a Workbench disk. It seems a big price to pay for addressing PostScript, but it seems that "some of the programs" on your hard drive (EA mentioned the problem occurs most when certain PD programs interfere with DMusic's PostScript output, but didn't mention any specific software) conflict with the printing pathways. If this is so, it should be addressed ASAP, since I can't imagine any serious electronic musician being too pleased with non-PostScript output, nor will it make folks happy to run DMusic from floppies. In the previous DMusic version, printing was also a problem. To get Hi-Res output you had to access a separate program, a time-consuming and often frustrating adventure. This time, printing is simple and sharp, and is accompanied by a special requester ("Print As...") that allows you

to alter several output parameters from within the program. I had no trouble getting ultra-sharp notation output with my HP-III Laserjet, but not when I booted from the hard drive with the PostScript cartridge plugged in.

Tempo tempore'

DMusic 2.0 not only allows you to target each division in a measure for a unique tempo setting (allowing songs to speed up and slow down internally), but it also prints tempo equivalents to the screen. In DMusic, the tempo equivalent is written as the number of quarter notes occurring in a minute of time for the section of the piece indicated. A very welcome addition indeed. The "Ornaments" selector ("ornaments" refer to volume indicators for notes like "forte", "pianissimo", and the like) also brings up a handy separate menu bar of choices for fine-tuning the volume levels of a piece.

Conclusions

Just as no Amiga visual artist would be caught without owning DPaint, so no serious (or even playful) Amiga sound artist will be satisfied without owning DMusic 2.0. I also appreciate the addition of MusicX files as an import option to the package. I would like to see an indicator added in the future that allows targeted measures to be repeated according to user input, not just twice as a default. Obviously, I would also appreciate easier and more direct access to PostScript output. David Joiner has integrated the work of DMusic's original creator, Geoff Brown, into a seamless blend of comfortable interface and the latest in accessible, state-of-the-art tools. The more you know about creating music, the more useful you will find this package to be—though it invites creative exploration by the novice as well.

•AC•

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Roomers

by The Bandito

[These statements and projections presented in "Roomers" are rumors in the purest sense. The bits of information are gathered by a third-party source from whispers inside the industry. At press time, these rumors remain unconfirmed and are printed for entertainment value only. Accordingly, the staff and associates of Amazing Computing cannot be held responsible for the reports made in this column.]

Big Changes At NewTek

NewTek, arguably the most important Amiga developer of all, is undergoing some major alterations, and that's of interest to all Amiga fans. Here's the news: Paul Montgomery, NewTek's vice president, has left the company. He wasn't the only one; well-known Toaster Girl Kiki Stockhammer, marketing maven Mark Randall, and several others (including software and hardware engineers) have also departed. Apparently, the departures are the result of disagreements over corporate direction, though exactly what those disagreements are is still not known to the Bandito. But it's clear that, in the end, NewTek is entirely owned by Tim Jenison, and what he says, goes. Apparently, the people leaving NewTek couldn't change Jenison's mind about what directions the company should take, and they chose to leave instead of implement policies they didn't agree with.

This comes as a shock to long-time NewTek watchers, who watched Paul Montgomery and Tim Jenison take NewTek from an obscure Amiga developer to the Emmy-award-winning darling of Hollywood and international media. Perhaps the stresses of such tremendous growth had a part to play in this rift.

So what does this all mean? Well, it's certainly not going to be easy to replace the people who have left NewTek. Paul Montgomery's ceaseless promotional ability and marketing vision, Kiki's matchless ability to demonstrate product, and all the other highly skilled people who are leaving (nearly a dozen all told) are a tough bunch to replace. Then again, NewTek still has no effective competition for their flagship product, the Video Toaster; they're about to ship the Screamer, the eagerly awaited rendering engine; and they have other products already far along in the development process. NewTek still has many dedicated and highly skilled employees, and can certainly find new ones to fill the gaps left by this departure (though they may not be as good, and it may take some time to find them). In the short term, this probably won't affect NewTek's sales. What happens in the long term depends on the people that NewTek finds to fill these positions, and the directions the company chooses for the future. The Bandito will keep an eye on Topeka, and when something happens, you'll know about it.

And what about the ex-NewTek employees? Certainly they could all find other jobs without any trouble. But when so many people leave at once, you do have to wonder if they have plans to form a new company. This is, after all, the classic Silicon Valley pattern: New companies form when key employees leave old companies. And NewTek is certainly a Silicon Valley company in spirit, if not in location. The Bandito's spies will keep a watch on what may happen, and loyal Roomer-followers will be the first to know if something is going on.

Mail Order Raw At Not Being Toasted

Here's some more NewTek news: NewTek has announced that Toasters will no longer be allowed to be sold through mail-order. They will only be available through certified dealers; that is, those dealers who NewTek has determined are savvy enough to offer extensive on-site service, support, and training. Of course, this means that the Video Toaster price is much less likely to be discounted; dealers will need the extra margin in order to pay for all those services.

The Bandito suspects that NewTek is looking for ways to cut their support costs, which must be amazing considering the fact that they still have a toll-free support hotline, unlike most of the hardware or software business these days. If the dealer is savvy enough, they can handle problems so NewTek won't have to, and everybody makes more money. Except for the customer, that is. Then again, not too many hobbyists can really afford the Toaster, anyway. Not until they come out with a \$395 version for CD³², that is. Say, you think there would be a market for that? The Bandito would sure like one; it sounds like great fun for parties.

LightRave

In case you haven't been following current events in the world of Toaster add-ons, there's been some interesting maneuvering going on. One of the biggest selling features of the Video Toaster is, of course, its 3-D software LightWave. Some people even call the Video Toaster a dongle that enables you to run LightWave. Of course, those folks spend all their time rendering LightWave scenes, but still, there's a lot of them.

Anyway, many people would like to be able to get LightWave without having to buy the entire Video Toaster package. And there's a large number of Video Toaster owners who would like to be able to split up their rendering tasks among several Amigas without having to buy each Amiga a Video Toaster. So far NewTek has let drop some vague hints about a stand-alone version of LightWave, but never anything definite. So into this obvious product opportunity marches LightRave.

This product allows you to run LightWave without a Video Toaster. Ironically, for a program that's designed to let the user defeat a dongle, LightRave itself comes with a dongle. The Bandito has heard that someone has figured out a way to defeat LightRave's dongle, but that may not be too important, because NewTek has come out with version 3.1 of LightWave. The new version 3.1 Toaster software fixes some bugs and adds a few minor features, but the primary reason for the software upgrade is to make LightRave inoperable. Are you still following this?

Of course, the LightRave people are determined to find a way around the 3.1 problem, so we may see yet another round of this tit-for-tat. Of course, the people who figured out how to defeat the LightRave dongle may try and figure out how to defeat the new version of LightRave that's figured out how to defeat the new version of LightWave... The Bandito's processor is getting overloaded trying to follow this. Maybe life would be simpler if NewTek just decided to sell a version of LightWave that doesn't require the Video Toaster. Wouldn't it?

[Note: See the New Products and Other Neat Stuff section of this issue for the announcement of LightRave 3.1. This version is compatible with NewTek's LightWave 3.1.]

Do Do That 3-Do That You Do So Well

The latest news on 3DO: they only sold some 22,000 units over Christmas, which is just a tad less than the 100,000 units they were expecting to sell. This has created a great deal of consternation, as you might expect, and some quick strategy rethinking. So here's what the bright boys at 3DO have come up with: they're offering two shares of 3DO stock to the manufacturer of any 3DO box for every unit they sell during 1994. Yup, so if Panasonic sells 100,000 3DO players, they get 200,000 shares of 3DO. And since 3DO stock is hovering around \$25 per share right now, that's not too shabby an offer if the stock price stays in

that vicinity. Immediately upon the heels of this announcement, Panasonic announced that they're cutting the price of the REAL 3DO player to \$499 from \$699. You can expect that to drop at least once more this year, too.

3DO is also entertaining some other ideas. 3DO on a card for PC clones? That's the latest plan to revive the sagging fortunes of the once white-hot media company. Seems like they want to expand the market base for games developers (and all the other developers, which at this point aren't many once you take out game developers). This card may come out by the fall, and the price will probably be about \$300. Still doesn't seem like a deal to the Bandito, not when you can get a CD³² for \$399 list. The Bandito still thinks that a CD³² card or complete multimedia upgrade kit would be a fine idea for PC clones, and a great way to sneak the Amiga into millions of PCs. Maybe that's where 3DO got the idea, from reading old Bandito columns.

Meanwhile, it looks like the software drought for 3DO is finally ending, what with several dozen titles shipping recently. There's now a lot to choose from, though it's still not clear that there's any software out there that people have to have so bad they'll spend \$499 on hardware to play it. The problem is compounded by the fact that many 3DO titles aren't exclusive to the hardware; developers are porting their titles to PC and Mac CD-ROMs, and even to Sega CD. So 3DO has to compete with people adding CD-ROM drives to their computers at the high end, and with Sega CD's at the low end. Will they survive? Hard to say at this point. It's certainly going to be tough for them, and it won't be any easier for Commodore and CD³², which has all the marketing problems of 3DO and then some.

Say, anyone else notice how 3DO tried real hard before the machine shipped to convince everyone that the 3DO machine was for education, multimedia, reference, movies, and anything but games? And if you look, all the software that's available for it is... games. Gee, didn't the same thing happen with CD-I (oh, excuse, please, the NEW spelling is "CD-i") and CDTV? You'd think these companies would learn from experience, wouldn't you? Guess everyone except the companies making the hardware figured out that these CD-ROM boxes are just game machines no matter how you try to make them look like something else.

Nobody seems to have learned that lesson except Commodore, which is truly amazing considering how many other obvious things they've managed to ignore in their

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corporate history. Be that as it may, Commodore is promoting CD³² as a game machine, with the added benefit that you can play movies on it.

CD³² Pulls A Fast One On Philips

Occasionally, Commodore does pull off a clever trick, even though you may not hear about it. The Bandito has uncovered one of Commodore's cleverest jests, which involves the new movie-on-a-CD format. It seems that Philips and a number of other hardware makers had agreed on a format for CD movies using MPEG compression. It's important to have a standard so that all CD-ROM boxes can play the same CD movies, otherwise the format may die before it really gets off the ground. Ah, but after all the companies agreed, Philips decided to get a competitive advan-

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tage by sabotaging this agreement. They struck a secret deal with Paramount so that the first 50 titles released would only work with Philips' CD-i players, and not according to the standard agreed upon. After that, Paramount's releases would adhere to the standard, but Philips hoped to gain a competitive advantage among the early adopters of CD movies.

Ah, but Commodore was wise to this maneuver, and quickly managed to reverse-engineer the process and implement a fix in CD³², so that all CD³² players can play these supposedly CD-i-only movies. Philips is NOT happy about this, as they are touting that their CD-i players are the only things around that can play the first CD movies.

Unfortunately, Commodore hasn't managed to tell the world about this nifty feature of CD³², so much of the advantage gained by their stunt is lost. Unless, of course, loyal Amiga fans let people know that CD³² can do this...

Commodore Shareholder's Movement Preparing Torpedoes

Well, the long-awaited Commodore annual shareholder's meeting has finally been announced. By the time you read this, it will have been held, and the Bandito will try to have a report for you about the events. Of course, it's unlikely that this meeting will be terribly well attended, since it's being held at the exclusive Lyford Cay Club in Nassau, Bahamas. Are you willing to bet that anyone who looks like an average Commodore shareholder won't get very far.

Remember to vote for those directors who are nominated this time; Irving Gould and Alexander M. "I'm In Charge Here" Haig, Jr. Of course, you may not want to vote for them if you think that the company's not doing so well these days and needs a change of management. Then again, it's pretty clear that the average stockholder's opinion isn't going to make much difference.

Oh, and there's one other important item on the agenda: A change in the company's articles that removes the current 3/4 majority of all outstanding shares required to implement certain things like mergers, sale of the company, transfers of stock or assets, or loans over \$10 million in value. And since you've got complete confidence in the current company management and board of directors, the Bandito is certain you'll be happy to turn over to them the power to make those decisions. Won't you? Why, how cynical of you to think that Commodore may have something in mind

when they put this item on the agenda. You probably even think that Commodore doesn't want to hear from 3/4 of the shareholders. My, my, you certainly don't trust the current management of Commodore, do you?

If you're interested in all of this, you might want to be in touch with the Commodore Shareholder's Movement. You can call Mike Levin at 703-787-8217 on evenings and weekends, or write to: Commodore Shareholder Movement, PO Box 8296, Philadelphia, PA 19101.

Commodore Australia For Sale

Is this a harbinger of things to come? Commodore's Australian business unit is being sold due to dire financial straits. Max Donnelly of the accounting firm Ferrier Hodgson has been appointed administrator of CBM Australia, apparently after the company's directors considered the personal implications of CBM's financial liabilities. Things are so bad that Commodore Australia is unable to pay off past due loans, despite sales of A\$540 million over the past year. The two major creditors are Commodore International and the Westpac bank. Kind of interesting, don't you think, that Commodore is foreclosing on their own subsidiary? Apparently the chances for Amiga sales in Australia are so poor Commodore doesn't even want to be there any more. They can't compete against the PC clones, so they're giving up. The Bandito only hopes that this isn't Commodore's master plan for other countries where they haven't been doing so well.

World Of Commodore Show Cancelled

Unfortunately, there's more bad news for the Amiga market these days. The New York World of Commodore show, originally scheduled for April 8-10, 1994, has been cancelled. According to a brief public statement, checks received for pre-registration will not be cashed and, when possible, returned. As to whether there will be another World of Commodore show in New York or elsewhere, they're not saying. From what the Bandito heard, Commodore pulled the plug by deciding not to appear. Kind of an odd way to keep interest going in their computers, wouldn't you say? The Bandito supposes that they didn't think CD³²s would go over so well with Amiga fans, which is pretty silly. Amiga fans are practically the only people who are even aware of CD³², since Commodore has been careful to keep a very low profile about the product.

Anyway, disappearing trade shows are a very bad omen, and the Bandito hopes that Commodore does all they can to make sure that this is the last such show that they skip.

Commodore Canadian PC Line Sold

Commodore, finally realizing that making and selling PC clones is a tough business, has sold the rights to the Commodore PC brand name in Canada to 3D Microcomputers Wholesale and Distribution (Canada) Inc. They'll take over marketing and selling Commodore's DOS-based PCs in Canada. The new lineup from 3D Micro includes seven systems, all based on an Intel 486. Two are so-called "multimedia" PCs with CD-ROM drives and sound cards; you know, ersatz Amigas. All the PC clones have 4 MB of RAM, MS-DOS 6.2, Microsoft Windows, and Microsoft Works.

In December, Doug MacGregor, president of Commodore in Canada, said his company decided to turn the DOS line over to 3D so it could focus on its proprietary hardware: the Amiga personal computer and the newly introduced CD³² game machine.

"We're finding it very difficult to compete in the MS-DOS marketplace right now and make money," he said. "We have to put our emphasis and focus on the Amiga, and that's the way that Commodore can be successful." Commodore Canada continues to market DOS machines to government, education, and institutions.

Ho ho, Doug, you shoulda said that Commodore's finding it difficult to make money in any market these days. Definitely a good decision to ditch the PC clones, though, and focus the company entirely on Amigas. Too bad they couldn't have figured that out a couple of years ago.

Commodore Marketing In Hot Water

The Bandito just has to pass along this fascinating tidbit that's been floating around the electronic data streams. It seems that an Amiga dealer claims to have had a brief chat with John DiLullo, head of marketing for Commodore US, at the Winter CES show in Las Vegas. According to this Amiga dealer, DiLullo had some interesting things to say about the Amiga, CD³² and Commodore's plans. The way the Amiga dealer tells it, DiLullo made it clear to the dealer that Commodore felt that Amiga dealers shouldn't be carrying CD³² (only mass-market stores

should), that Amigas had no real future as a computer except in a very tiny niche market, and that Amigas couldn't really compete against 386 PCs.

Now, these comments were posted to various networks, and word of this actually got back to Commodore, and DiLullo claims that he was misinterpreted and misquoted. Of course, in cases like this it's always hard to figure out exactly what was said and (more importantly) what was meant by various comments. There are a few things that one can derive from this whole incident, though. First of all, it's clear that Amiga dealers are still being treated as second-class citizens by Commodore, and they aren't getting a clear message about what's going on with Commodore's future plans. Second, that Commodore isn't communicating very well with anybody, else this sort of misunderstanding would never happen.

Has Commodore bothered to communicate to the press, the dealers, and the users what its plans are for the Amiga and for CD³²? Not really. Sure, we have plenty of cheerful statements from Lou Eggebrecht about all the neat hardware that they're working on in the labs, but that doesn't really address the issue of what dealers are going to be allowed to sell and when. Maybe it's just that Commodore doesn't know what they plan to do; but that's a pretty frightening thought, isn't it? If Commodore would like to stop endless speculation and inflamed rumors from circulating, all they have to do is talk to the world about what they're doing.

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DIGITAL IMAGE SPECIAL F/X

PART VII: Motion Blur

by William Frawley

With a passionate desire for photographic realism, this month we'll give *ADPro's* Composite Control requester a thorough workout when we learn how to create the illusion of movement by adding motion blur to still images.

The Goals

Now that almost every application in the image processing genre has some sort of motion blur effect, namely *ImageFX*, *ImageMaster*, and now an interesting new shareware offering from Norway called *Digital Illusions* by Tonny Espeset, it's time that we the people who are still using *ADPro* bring it up to specs in this department. With the included *ARexx* script, it's as simple as entering a few parameters. Once we learn the theory behind motion blur, we'll discover how to realize a related photographic effect, the technique of multiple images, or as it is sometimes called, stop motion.

If you're fortunate enough to have *ImageFX*, you'll find that even more variations of motion blur lay untapped in it's regionalized, brush processing abilities. By utilizing brushes, you do not

need to create masks to localize the effect of motion as we would have to in *ADPro*. Therefore, it is best to use *ADPro/ARexx* when a global motion blur is desired and *ImageFX* when only a portion of the intended image is to be processed. Even though *ImageFX* does have a global motion blur convolution and a good one at that, using *ADPro* with *ARexx* allows you to vary more parameters to produce some wildly interesting mutations. Be sure to uncomment the appropriate lines of code to take advantage of this. Since I do not own *ImageMaster*, I cannot say for certain what the extent of possibilities are with that application.

Now that we have an idea of where we're going, let us take a brief look at the origins of motion blur as it relates to the field of photography, cameras and film.

ImageFX

Motion Blur

Digital Illusions

Motion Blur

MotionBlur.adpro (ARexx)

Motion Blur

FIGURE 1
Comparison Tests

The Drama of Motion

One great advantage the camera lens has over the human eye is the ability to capture the nuances of motion that escape our ordinary perception. Photographs have the ability to freeze an instant of time, allowing us a glimpse into the unfathomable dimension which is inseparably entangled in the other dimensions of space supporting our existence.

However, not every instant will be frozen in the frame. There are times when photographing that some blur will result. It is this blurring that conveys a sense of motion, hence the term, motion blur. There are several factors responsible for this occurrence of blurring.

One reason may merely be a shaky hand at the helm. But aside from the accidental, there is also the purposeful. Photographers will sometimes pan the camera with a moving subject in order to keep the subject sharply in focus to freeze the moment, thus blurring the background in the process. This effect can be seen in any sideline sporting event photograph. There is also the opposite, where we have a stationary camera, a slow shutter speed, and a moving subject. This option freezes the background and effectively motion blurs the subject, this time emphasizing movement. Exceptions to this technique are cases when the subject is moving directly toward or away from the camera, a condition where movement is less apparent.

Ironically, most artists try to avoid this motion blur situation, except when the effect is intended to mimic the reality of motion, which is the reason why most of the high-end animation software available have included this feature. For instance, animating a moving starfield without a motion blur effect will look rather mechanically unreal, as I soberingly discovered in an Aladdin4D project involving a space scene.

For some photographers wishing to overcome the effects of motion blur and opting to preclude the use of panning, choosing a faster shutter speed helps. However, this does not come without a price, for an increased shutter speed means less light reaching the film. Therefore, the aperture (Amazing Computing, Vol. 9 No. 1, p.67) must be opened wider to allow more light through. Unfortu-

FIGURE 2
Motion Blur Via ARexx



FIGURE 3
An Imagine ScanLine Image With Stop Motion Effect Added

nately, this results in a reduced depth-of-field, a condition that is sometimes not desirable.

Finally, the panning technique combined with a slow shutter speed can be used, for example, to convey an even greater sense of the speed by panning with the subject in sharp focus running against a blurred background, while simultaneously showing the blurring of the arms and legs in movement. As you can see, motion blur can be used in many ways for a variety of artistic purposes.

FIGURE 4

Various Settings for MotionBlur.cdpro

Mix:10 Len:10 *	Motion Blur	Mix:40 Len:40 *	Motion Blur
Mix:20 Len:10 *	Motion Blur	Mix:45 Len:40 *	Motion Blur
Mix:30 Len:20 *	Motion Blur	Mix:45 Len:60 *	Motion Blur
Mix:30 Len:10 *	Motion Blur	Mix:50 Len:10 *	Motion Blur
Mix:30 Len:20 *	Motion Blur	Mix:50 Len:40 *	Motion Blur
Mix:40 Len:10 *	Motion Blur	Mix:50 Len:50 *	Motion Blur
Mix:40 Len:20 *	Motion Blur	Mix:50 Len:60 *	Motion Blur
Mix:50 Len:20 *	Motion Blur	Mix:55 Len:60 *	Motion Blur
Digital Illusions	Motion Blur	ImageFX	Motion Blur

NOTE: All use Dec=10 Angle=0

* Denotes some length

The Science of Stop Motion

Discussion of motion blur would not be complete without a brief mention of the multiple image technique, or stop motion photography. Especially relevant in portraying high speed action, this method allows the capture of a succession of movements in a single frame or image to emphasize the subject's flow of motion. There are two basic approaches.

The easiest is to use an autowinder attachment with the camera so that the shutter opens and closes in rapid succession but the film stays on the same frame. This builds up a series of images on one frame. It is also possible, with this technique, to pan the camera with the subject to again blur just the background, thus enhancing the effect of viewer motion.

The second approach involves the use of a stroboscopic flash unit to produce pulses of light with rates of 50 or more per second. Most effective in a darkened room, the flashes of light will freeze the subject in the act of motion while the shutter speed is set extremely low or left open completely for the duration of movement. This results in a series of extremely fluid images detailing the movement of the subject which the human eye would normally be oblivious to.

With this exposition on motion now under our belt, let's try to duplicate these effects with ordinary still images or photos which you have created or scanned.

Motion Blur in ADPro

Take a look at any motion blurred image and you'll notice that the blur becomes increasingly transparent as it trails off from the primary origin point. Ideally, the easiest way to accomplish this effect would be to pick up the subject to blur as a brush, feather the edges, and with a straight line tool, stamp the brush down over the original and drag in the desired direction using a variable flow rate so the strength diminishes over the length of the line. Since ADPro does not have these features our efforts will be to achieve a global motion blur, where hopefully the blur will stand out more in the primary area of interest of the image and the effect on the background will be subdued.

The means to achieve this motion blur effect lie solely with ADPro's compositional ability, namely in the Composite Control requester. With it, we'll try to duplicate the effect mentioned previously by compositing the same image onto itself "n" number of times, starting "n" pixels away from the original, and each time decreasing the offset and Mix value as we "build up" the image to its original position. Here, n represents the length of the motion blur desired.

Reducing the Mix values after each step may seem contradictory to increasing the weight of each succeeding image, but remember that each current Mix value reduces the weight of all previous images by that percent. When we wish to linearly reduce the weights in a multiple composite procedure, computing the proper Mix values for each

succeeding step, or more importantly, the initial Mix value, can get a bit tricky. The proper Mix values are a function of the length of the desired motion blur, the initial Mix value, and the amount the Mix value is decreased for each succeeding composite step.

Altering these three variables can produce some wildly unexpected and unsatisfactory results. I've included an ARexx script that will help you see how the final weights of each composited image vary with different initial Mix, Length, and Decrement values. See Listing 3 at the end of this article.

In a nutshell, the process is as follows. Load in your image. For faster processing, copy this image to RAM: as well. Decide on the length and direction for the motion blur. Turn on Composite and load in the image you saved in RAM: or from the original storage medium if memory is sparse. In the Composite Control requester, enter an X or Y Offset that is double the blur length you chose and in the appropriate direction. If your desired angle is anything but in the cardinal directions of N, S, E or W, you'll have to convert that radial vector to Cartesian coordinates. This is one of the reasons why using the ARexx script is much easier. Next, enter a value of 50 for Mix and accept the requester. Repeat this process "Length" amount of times, reducing the Offsets by 2 and Mix by 1 each time through. Finally, once you've completed this process, composite the original image again, but this time with no Offsets and at a Mix that is proportional to the blur length, somewhere between 10 and 30. This step strengthens the original image relative to the motion blur.

I must point out here that for blur lengths greater than 50, the initial Mix value should equal the length value. If it doesn't, the Mix value will reach zero before the Offset does and the final composited images will have no effect. Studying the ARexx script will make this more clear. I think you'll find that using ARexx will expedite matters considerably, especially if longer motion blurs are desired.

Well, that's the theory behind computer generated motion blur, at least my theory. Next, we'll take a look at some variations on motion blur. But first, let's examine what might be involved if we want to localize the motion blur to a particular element in ADPro.

Regionalized Motion Blur Masking

Assuming that you do not have one of the image processing applications that have regionalized processing, restricting motion blur to a particular area of an image using ADPro requires the additional services of a paint program. DPaint will do nicely.

For this process, you would first add the motion blur to the image as previously described or use the included ARExx script. Save this motion blurred image as a 24-bit file, convert it to a hi-res 16-color ILBM, and save then save it again. Import this ILBM into DPaint and mask out with black every part of the image except for the area of the desired motion blur, which you would then mask out with white. Save this image over the old one.

Back in ADPro, composite this new ILBM over the 24-bit motion blurred image, masking out the white area. This leaves the 24-bit image with the selected motion blur elements surrounded by black. Save this file over the old 24-bit motion blurred one.

Finally, with Composite off, load in the original, unblurred image. Turn on Composite again and load in the 24-bit motion blurred image. This time mask out the black portions and Mix at 100 with the original. Check your results. You should have ended up with specific motion blurred areas composited onto the unaffected original image.

The Ghosting Effect

Just for fun, here's a quick and interesting effect I discovered while experimenting with motion blur. This technique works best if the image is of a person or familiar object. Load in an image and blur it approximately 10 times. Save it. Load back the original image again. Now composite the blurred image onto the original with an X Offset of either -60 or +60, depending on where your

subject is in the frame. Use a Mix value of about 50%. The result should appear to be a ghost of the main subject.

The Stop Motion Formula

Where the motion blur technique conveys movement through blur, the stop motion method freezes the subject in a sequence of incremental time snapshots. Therefore, each image involved must contribute equally to the composition, as opposed to the motion blur effect where each successive image's contribution decreases.

Essentially then, the only difference between achieving a motion blur effect and a stop motion one lies in choosing the appropriate Mix values and the order in which each succeeding image is composited. In other words, instead of laying down the images farthest to nearest and decreasing the Mix value by 1 each time, the stop motion technique begins compositing with the original at full weight with each successive image n using a Mix of $100/n$. So if there are 5 images, each image would then contribute $100/5$, or 20%, to the total composition. Let's give it a try.

For realistic results, the images chosen should be slightly different from each other to show some kind of change in progress. It would also help if the subject was shown over a solid background so that background could be masked out when composited over each successive image. However, if none are available, simply use an image which you feel is appropriate. For this exercise, let's try a five-image stop motion effect, where each image will then contribute 20% to the overall composition. Let's assume you just have the one image on which to work.

In ADPro, load in the image and then turn on Composite. Load in the image again and in the Composite Control requester, set the Mix value to $100/2$, or 50%. Adjust the X Offset to +25 or -25, ➔

MotionBlur.adpro v1.0

```
*****
/*
/*      MotionBlur.adpro  v1.0  by William Frawley  */
/*
/*      January 20, 1994
/*
/*      Adds simulated global motion blur to loaded image.
/*
/*
/*
/*      Usage: Call from a function key in ADPro by renaming
/*      this program in one of ADPro's hotkey naming
/*      conventions (xFy.adpro) where x=QualifierKey
/*      and y=1-0, or use the ARExx macro script
/*      F0.adpro included with ADPro which allows the
/*      user to select any ARExx script via a handy
/*      file requester.
/*
/*
/*      NOTE: Image is buffered in RAM: to expedite
/*      compositing. Large images and blur lengths
/*      will take quite some time on unaccelerated
/*      machines.
/*
/*
*****
```

OPTIONS RESULTS

```
*****
/*      Load rexxmathlib.library for trigonometric functions  */
*****
```

```
IF -SHOW('L','rexxmathlib.library') THEN,
  CALL ADDLIB('rexxmathlib.library',0,-30)
```

ADDRESS "ADPro"

ADPRO_TO_FRONT

```
*****
/*      Ask user for Length of blur. Default is 40.      */
*****
```

Length=40 /* Default Length */

```
GetNumber "Enter Motion Length:" 40 5 60
IF RC=0 THEN CALL Fail("Wrong Parameter!")
Length=ADPRO_RESULT
```

```
*****
/*      Ask user for blur Angle. Default is 0 (to the right)*/
*****
```

```
GetNumber "Enter Angle (0=rt 180=left):" 0 0 359
IF RC=0 THEN CALL Fail("Wrong Parameter!")
Angle=ADPRO_RESULT
```

```
*****
/*      Ask user for beginning Mix value. Default is 50.  */
*****
```

Mix=50 /* Default starting Mix */

```
**** NOTE: Uncomment the following lines for greater ****
**** flexibility and experimentation! ****
```

```
/*
GetNumber "Enter Beginning Mix:" 50 1 100
IF RC=0 THEN CALL Fail("Wrong Parameter!")
Mix=ADPRO_RESULT
*/
```

```
*****
/*      Ask user for Mix Decrement value. Default is 1.  */
*****
```

Dec=1 /* Default Mix Decrement */

depending on which direction you want the motion to occur. If you have a solid, one-color background, enter this color value in the RGB transparency gadgets. Accept the requester. Now repeat this procedure three more times, except each time increase the X Offset by another 25 and change the Mix level to $100/n$, where n is the n th image you're compositing. That's it. Pretty simple, huh? Let's briefly examine some of the more important points of the ARexx scripts.

The Scripts

As you can see, first we'll need to load in the 'rexmathlib.library' because later in the script several important arithmetic and trigonometric math functions will be used to translate from the polar coordinate system to the Cartesian coordinate the direction and length of our motion blur vector. See, calculus does come in handy.

When ARexx/ADPro asks for the blur Angle, "0" refers to the blur travelling in the positive X direction (to the right) and "180" means travelling in the negative X direction (to the left). Naturally, a value of say "135" would point the tail of the blur in the 10 o'clock position.

Next note the two sections of code that are commented out. When uncommented, the user will be asked for a beginning Mix value and a Decrement value other than the default values. Experimenting with different values for these variables will produce some wild and weird results, most of them unsatisfactory.

Next note the line 'TempPic="RAM:TempImage.24"'. Here, ADPro saves out the current image to RAM: so operations are speeded up when the same image is loaded back in multiple times

in the composition process. If you feel that you don't have enough memory, change this path to some location on your hard or floppy disk.

When we finally reach the "Do It!" section, note that in the main DO loop the initial index "i" is started at $\text{Length} \times 2$ and subsequently decremented by 2 each time through. This will cause the first image to be composited at a distance of twice the user's request for the length of the motion blur with each subsequent image stamped down 2 pixels away from its neighbor. Why you ask? Because the fineness of detail for the blur is not paramount for the motion blur effect to appear convincing. We can afford to skip every other pixel in the composite process because each image will play a part in filling in the gaps.

Conclusion

The rest of the code is either pretty self-explanatory or commented appropriately. Since the StopMotion.adpro script is rather similar to MotionBlur.adpro, I'll leave it up to you to figure out its essence. I've also included TestMix.rx if you would like to see how entering different values for Mix, Decrement, and Length will affect the final weights of each individual image in the composite process. Simply run it from a shell and be prepared to pause the output a couple of times for examination.

Well, I hope this topic has been helpful in your continuing quest for knowledge, and I urge you to try out the scripts. They'll reduce the amount of time needed for this process considerably.

```

/**** NOTE: Uncomment the following lines for greater ****/
/**** flexibility and experimentation! ****/

```

```

/*
GetNumber "Enter Mix Decrement:" 1 0 50
IF RC=0 THEN CALL Fail("Wrong Parameter!")
Dec=ADPRO_RESULT
*/

```

```

/**-----**/
/** Save Current Image Temporarily to RAM: to expedite **/
/** compositing process. **/
/**-----**/

```

```
TempPic="RAM:TempImage.24"
```

```

SFormat "IFF"
PrevSF=ADPRO_RESULT /* Get previous SAVE format */
Save TempPic "RAW"

```

```

/**-----**/
/** The following conditional "fudges" the angle over **/
/** by 1 when it is equal to 90 or 270 degrees, as the **/
/** trigonometric function TANGENT is undefined (or **/
/** reaches infinity) at these values. See graph below. **/
/**-----**/
/* (start comment)

```



```

* |
* |
(end comment) */

```

```

IF Angle=90 | Angle=270 THEN Angle=Angle+1
Rads=Angle*(3.14159/180) /* Converts degrees to radians */

```

```

/**-----**/
/** Do It! **/
/**-----**/

```

```
LFormat "IFF"
```

```
IF Length>50 THEN Mix=Length /* Adjust Mix if over 50 */
```

```

DO i=Length*2 TO 2 BY -2 /* Double the starting position */
/* to increase the blur effect */

```

```

X=TRUNC(SQRT(POWER(i,2)/(1+POWER(ABS(TAN(Rads)),2))))
Y=TRUNC(SQRT(POWER(i,2)-POWER(X,2)))

```

```

IF Angle>90 & Angle<270 THEN X=-X /* Translate coords */
IF Angle>0 & Angle<180 THEN Y=-Y /* for ADPro system */

```

```

Load TempPic X Y Mix /* Composite pic at current off- */
/* set and mix value */

```

```

Mix=Mix-Dec /* Decrement Mix value for next */
/* time through the loop */
END

```

```

NewMix=TRUNC((2/5)*Length+6) /* Calculate a new Mix value */
/* based on selected length */

```

```

Load TempPic 0 0 NewMix /* Recomposite at no offset and */
/* a new calculated mix so as */
/* to strengthen original image */

```


StopMotion.adpro v1.0

```

/*****
/*
/*      StopMotion.adpro v1.0 by William Frawley
/*
/*
/*      February 11, 1994
/*
/*
/*      Composites a series of related images to simulate
/*      stop motion photography.
/*
/*
/*      Usage: Select a series of visually related images
/*      using the GetFiles requester, then choose an
/*      offset value to separate each image. The
/*      first image selected will be the anchor.
/*      Finally, enter the direction of travel angle.
/*      For example, "0" would arrange images as if
/*      coming from right side of screen, whereas
/*      "180" from left. For best results, images
/*      should contain a solid background color for
/*      more effective matting.
/*
/*      NOTE: This uses ADPro's GetFiles function to select
/*      multiple files. However, this function is
/*      incompatible with the public domain program
/*      Magic File Requester. Disable this before
/*      using!
/*
*****/

```

OPTIONS RESULTS

```

/*****
/*
/*      Load rexxmathlib.library for trigonometric functions
/*
*****/

IF ~SHOW('L', 'rexxmathlib.library') THEN,

```

```

/*****
/*
/*      Cleanup!
/*
*****/

ADDRESS COMMAND 'C:Delete' TempPic

SFormat PrevSF          /* Restore original SAVE format */

/*****
/*
/*      EXIT
/*
*****/

Okay1 "Finished!"

```

EXIT 0

```

/*****
/*
/*      INTERNAL FUNCTIONS
/*
*****/

```

```

Fail:

  PARSE ARG Text
  Okay1 Text
  EXIT 20

RETURN

```

CALL ADDLIB('rexxmathlib.library',0,-30)

ADDRESS "ADPro"

ADPRO_TO_FRONT

```

/*****
/*
/*      Ask user to select a list of files.
/*
*****/

```

```

GetFiles "SHIFT-CLICK files to be processed..."
IF RC=0 THEN CALL Fail("Whoops!")
FileList=ADPRO_RESULT

```

```

/*****
/*
/*      Ask user for blur Angle. Default is 0 (to the right)
/*
*****/

```

```

GetNumber "Enter Angle (0=right 180=left):" 0 0 359
IF RC=0 THEN CALL Fail("Wrong Parameter!")
Angle=ADPRO_RESULT

```

```

/*****
/*
/*      Ask user for Offset between images.
/*
*****/

```

```

GetNumber "Enter Offset:" 25 1 100
IF RC=0 THEN CALL Fail("Wrong Parameter!")
Offset=ADPRO_RESULT

```

```

/*****
/*
/*      Ask user if there is a solid background for masking
/*
*****/

```

```

Okay2 "Solid Background? OK=yes CANCEL=no"
IF RC=0 THEN Solid=0
ELSE Solid=1

```

```

/*****
/*
/*      If Solid background, then get color values
/*
*****/

```

```

GetNumber "Enter RED value:" 0 0 255
IF RC=0 THEN CALL Fail("Wrong Parameter!")
Red=ADPRO_RESULT

```

```

GetNumber "Enter GREEN value:" 0 0 255
IF RC=0 THEN CALL Fail("Wrong Parameter!")
Green=ADPRO_RESULT

```

```

GetNumber "Enter BLUE value:" 0 0 255
IF RC=0 THEN CALL Fail("Wrong Parameter!")
Blue=ADPRO_RESULT

```

```

/*****
/*
/*      Parse FileList
/*
*****/

```

```

n=0          /* Initialize file # index */

DO WHILE FileList ~= '' /* Ahh, the beauty of AREXX! */

```

```

  PARSE VAR FileList File.n FileList
  n=n+1
  END

```

```

/*****
/*
/*      Adjust Angle and convert to radians for trig functs
/*
*****/

```

```

IF Angle=90 | Angle=270 THEN Angle=Angle+1

Rads=Angle*(3.14159/180) /* Converts degrees to radians */

```

```

/*****
/*
/*      Do It!
/*
*****/

```

LFormat "UNIVERSAL"

```

DO i=0 TO N-1 /* N equals number of files we parsed */
/* and begin array index with zero */

```

```

  Dist=i*Offset /* Distance from anchor image */

```


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Circle 159 on Reader Service card.

PARSE ARG Text
Okay! Text
EXIT 20

RETURN

TestMix.rx v1.0

```

/*****
/*
/*      TestMix.rx  v1.0      by William Frawley
/*
/*      February 11, 1994
/*
/*  Computes the final weights of each image in a multi-
/*  ple composite process allowing for changes in the
/*  initial Mix value, Decrement, and magnitude of the
/*  initial Offset or length.
/*
/*
/*  USAGE: Run from a shell:
/*
/*      1.> run rx TestMix.rx
/*
/*  Or to save the output to a file:
/*
/*      1.> run rx >Path/output.txt TestMix.rx
/*
/*
*****/

```

OPTIONS RESULTS

NUMERIC DIGITS 2 /* Accuracy to two decimal points */

```

say 'Enter starting Mix value (1-100): '
parse pull Mix
say
say 'Enter Mix Decrement value (1-50): '
parse pull Dec
say
say 'Enter Length of blur (1-60): '
parse pull Length
say

```

```

Mix=Mix/100
MixWeight=1-Mix
Dec=Dec/100
MixValue.=0

```

```

DO i=1 TO Length      /* Initializes each images Mix value */
  MixValue.i=Mix

```

```

DO j=1 TO i-1          /* Updates each images Mix value */
  MixValue.j=MixValue.j*MixWeight
END

```

```

Mix=Mix-Dec
MixWeight=1-Mix

```

END

```

DO k=1 TO Length      /* Outputs each images final weight */

```

```

  MixValue.k=MixValue.k*100
  IF MixValue.k<1 THEN MixValue.k=0
  say 'Image # ' k ' Value is: ' MixValue.k
END

```

EXIT

•AC•

```

X=TRUNC(SQRT(POWER(Dist,2)/(1+POWER(ABS(TAN(Rads)),2))))
Y=TRUNC(SQRT(POWER(Dist,2)-POWER(X,2)))

```

```

IF Angle>90 & Angle<270 THEN X=-X      /* Translate coords */
IF Angle>0 & Angle<180 THEN Y=-Y      /* for ADPro system */

```

```

Mix=TRUNC(100/(i+1))      /* Calculate Mix percentage so */
/* that ith image contributes */
/* equally to composition */

```

```

IF Solid=1 THEN DO /* If user has a "solid" background */
  Load File.i X Y Mix Red Green Blue
  IF RC=0 THEN CALL Fail("Load Failed!")
END

```

```

ELSE DO
  Load File.i X Y Mix
  IF RC=0 THEN CALL Fail("Load Failed!")
END

```

END

```

/**-----**/
/** EXIT                                     **/
/**-----**/

```

Okay! "Finished!"

EXIT 0

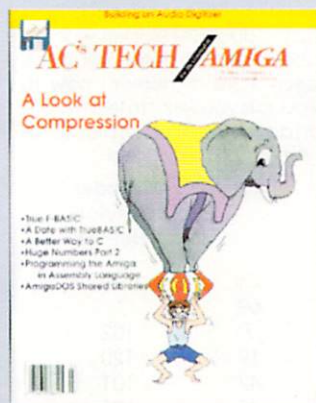
```

/*****
***** INTERNAL FUNCTIONS *****/

```

Fail:

Please Write to:
William Frawley
c/o Amazing Computing
P.O. Box 2140
Fall River, MA 02722-2140



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2	-	Labyrinth of Time
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4	2	Zool
5	8	D/Generation
6	-	Fire Force
7	3	Oscar
8	-	Pirate's Gold
9	6	Robocod: James Pond 2
10	-	Mean Arena

Top 10 Amiga game Titles

Feb	Jan	
1	-	Mortal Kombat
2	1	Frontier: Elite 2
3	-	Star Trek 25TH Anniversary
4	4	Tom Landry Football Deluxe
5	6	Gunship 2000
6	3	Pinball Fantasies
7	-	Settlers
8	-	Alien Breed 2/Body Blows
		Galactic Bundle
9	-	Syndicate
10	-	Ishar 2

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Creative Logic	71	104
D.K.B. Software	17	194
Delphi Noetic Systems, Inc.	27	*
Digital Creations	CIII	109
Digital Creations	CIV	108
Digital Imagery	4	125
Fred Fish	9	106
Great Valley Products	1	105
Home Brew Utilities	70	107
Horizon West Productions	71	123
INOVAtronic	5	114
J&C Computer Services	69	165
Laser Craft Unlimited	70	103
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CD³² Review

Pirates! Gold

Pirates! Gold is an action adventure game in which you take on the role of a pirate and plunder ships and towns in the New World for profit. You can choose to either become part of a famous expedition or start off on your own voyage. The goal is simple: acquire as much money and ships as you can and retire a wealthy pirate. Keep in mind that you have a crew who is just as eager to be rich as you and you must collect enough riches to keep them satisfied or they will mutiny.

Adversaries are plentiful. The French, English, Spanish, and Dutch have many colonies and ships in the Caribbean. You can attempt to side with one of these forces and get paid for fighting their battles. Or, you can go independent and fight whoever comes along.

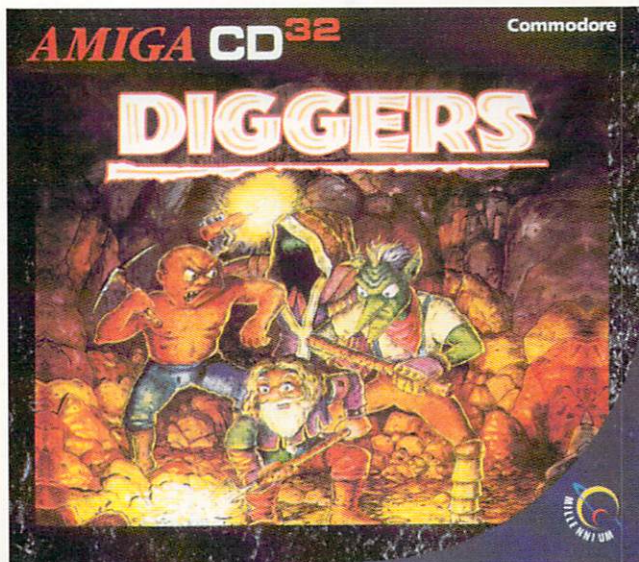
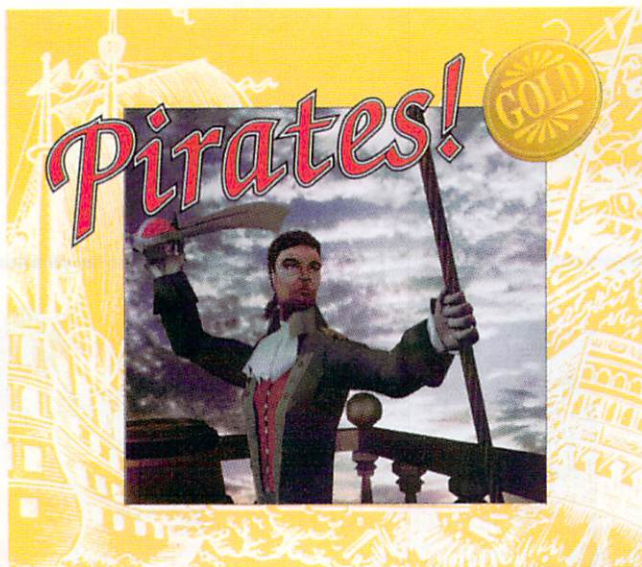
Gameplay is sometimes slow but still interesting. Battles can take place at sea and on land and may involve the use of your ship's guns or test your skill at sword play. There are plenty of opportunities for battle. Be wise in what you do to your enemies at sea. Whenever possible, capture the opposing ship. It will come in handy as your riches grow. Remember, you need to store your loot somewhere. The amount of cargo you can carry is limited by the total amount of storage space of your armada. The number of ships you can have at any one time is limited by the number of trained crewmen you have available.

A map tells you the location of each town and gives information on the town's wealth and defenses as well as nationality. You

can choose to attack the town, sneak into the town, sail into the harbor, march into the town, or leave. Sneaking in is the least treacherous. I would only recommend sailing into the harbor if you have allied yourself in some way with the town's home country. Once inside the town, you can visit the local merchant, the tavern, the bank, shipbuilder, and the governor. The merchant will trade goods with you. The tavern can be a source of valuable information and occasionally, new crew members. The shipbuilder will buy or repair your ships. The bank will divide your plunder among your crew. Hint: when you divide your plunder, you are left with the ship and crew you began with. It is a good idea to sell all excess items off before dividing the booty. The governor in a town can do many things for you. He may ask you to go on a special mission, offer you a Letter of Marque, or attempt to recruit your services in some way. The governor can also grant amnesty and reward your pirate for a job well done.

Control of the game is simple with the direction pad and the red fire button on the controller. You guide your ship around the Caribbean in search of treasure and loot. The map in your cabin and information gathered from towns will assist you in deciding which town to plunder next.

The manual gives an overview of some of the more famous pirate expeditions and an index of ships used at that time. The AGA graphics are good. Gameplay can be slow at times. It would have been nice to see more than one "town setting" for variety. There are some obvious leftover elements from the floppy version of *Pirates! Gold* but the elements seem to have been adapted well to the CD³² controller.



Diggers

Diggers operates under a simple premise. Choose a race of diggers from the planet Zarg and mine for hidden treasures, lost civilizations, and other goodies. You are in competition with other diggers trying to gain the most wealth from your finds.

This game is something like *Lemmings* without a cause. You control the actions of your diggers. Direct them, outfit them with tools, and select from a menu of tasks for each to perform. You must watch all of your diggers carefully so that they do not wander off into trouble. It is easy to lose members of the digging party to hidden traps and various elements of certain digger death.

Amazing Computing

Vol. 8, No. 2, February 1993

Highlights Include:

"Extending the AMOS Sort," Dave Senger looks at the AMOS sort function.
 "Business Cards," Soft-Logik's Dan Weiss gives an in-depth tutorial on how to create your own business cards.
 "AD1012," a review by Rick Manasa.
 AND! A special sneak preview of the One-Stop Music Shop from Blue Ribbon & complete coverage of the WOCA Toronto!

Vol. 8, No. 3, March 1993

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"Babylon 5," the Amiga changes the way TV shows are made, by les Paul Robley
 "AmigaVision Projects," by William Murphy
 "Art Expression," review by Merrill Callaway
 PLUS: Creative business forms & CES Winter '93

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"TriplePlay Plus & SyncPro", reviews of two great music products by Rick Manasa
 "CanDo," a review of the application development system from INOVAtronic, by Rob Hayes
 ALSO: Super VideoSlot for April, AREXX, cli, and great Diversions!

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Highlights Include:

"Directory Opus", review of the latest version of Directory Opus and a start-up tutorial by Merrill Callaway
 "Media Madness," explores the inside of Blue Ribbon Soundwork's new Media Madness, by Todor Fay & David Miller
 "SuperJAM 1.1," a review of the latest release of SuperJAM! by Rick Manasa
 "ImageFX," review by R. Shams Mortier
 ALSO: Super VideoSlot for May—The New Graphics Modes!

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"AMOS Turns Professional", review of a major upgrade hailed as a comprehensive development system, by Jimmy Rose
 "Searching Medical Literature," using the Amiga to tap the vast resources of medical on-line services, by Dr. Michael Tobin
 ALSO: Newsletter Design, AREXX Programming, Hot Diversions

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"TypeSMITH 1.0", review of Soft-Logik's new font editor, by Merrill Callaway
 "OpalPaint 2.0," review of the latest version of this paint program for the OpalVision board, by R. Shams Mortier
 "Structured Drawing," basic features and advanced techniques, by Dan Weiss
 "DeluxePaint IV AGA," review of the latest paint package for the AGA machines, by R. Shams Mortier
 ALSO: Super VideoSlot, AREXX, and New Products!

Vol. 8, No. 8, August 1993

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"Amiga Vision Professional", review Commodore's upgraded authoring system, by Douglas J. Nakakihara
 "Art Department Professional 2.3," review of the latest release of AdPro from ASDG, by Merrill Callaway
 "Professional Page 4.0," the latest incarnation of Pro Page, by Rick Manasa
 "Pseudo Radiosity Effects," why ray tracing is not an accurate model of true light behavior, by Mark Hoffman
 "T-Rex Professional", a review of the latest release of T-Rex from ASDG, by Merrill Callaway
 ALSO: AC Phone Book: A directory of Amiga Developers!

Vol. 8, No. 9, September 1993

Highlights Include:

"Adventures with Aladdin", Part III of this tutorial series on Aladdin 4D, by R. Shams Mortier
 "CanDo," First installment of this series for CanDo programmers, by Randy Finch
 "Caligari 24," Review of version 3.0 of this 24-bit software, by R. Shams Mortier
 "Coming Attractions," A look into the future attractions in Amiga games, by Henning Vahlenkamp
 ALSO: WOCA—Australia & Summer CES!

Vol. 8, No. 10, October 1993

Highlights Include:

"Making Waves", Focus on the wave requester in Part IV of the Aladdin series, R. Shams Mortier
 "Clouds in Motion," Animated clouds in Scenery Animator, by R. Shams Mortier
 "Media Madness," Discover what it can do for Bars&Pipes, by Rick Manasa
 "Bars&Pipes Professional 2.0," review by Rick Manasa
 "Bernoulli MultiDisk 150", A review of this great lomega drive.
 ALSO: Commodore's new CD32!

Vol. 8, No. 11, November 1993

Highlights Include:

"CanDo", This installment covers developing a custom object by combining several standard CanDo objects, by Randy Finch.
 "Brilliance," A complete review of this hot new paint and animation program from Digital Creations, by Frank McMahon.
 "Online," The introduction of this new telecommunications column for the Amiga, by Rob Hays.
 "Get Graphic: Digital Image F/X," The introduction of AC's new graphics column, by William Frawley.
 "Picasso II", A review of one of the best new graphics cards available, by Mark Ricken.
 ALSO: WOCA Pasadena: Commodore introduces CD-32! Plus, the incredible LightRave, a Video Toaster emulator!

Vol. 8, No. 12, December 1993

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"CanDo Tutorial", Basic concepts behind animations and presentations, by Randy Finch.
 "LightRave Review," A review of this unique Toaster emulator, by Shams Mortier.
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 "Get Graphic: Digital Image F/X," The introduction of AC's new graphics column, by William Frawley.
 "Video Toaster 4000 Review", A review of the latest Video Toaster by Shams Mortier.
 ALSO: 1993 Reader's Choice Awards!

Vol. 9, No. 1, January 1994

Highlights Include:

"Designing Holiday Cards", Using your favorite DTP programs to create holiday cards, by Dan Weiss.
 "Accent on Multimedia," First in a series exploring the history and concepts behind multimedia, by R. Shams Mortier.
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 "Commodore 1942 Monitor," In-depth study of this comprehensive Amiga paint package, by R. Shams Mortier.
 ALSO: Commodore Shareholders Movement

Vol. 9, No. 2, February 1994

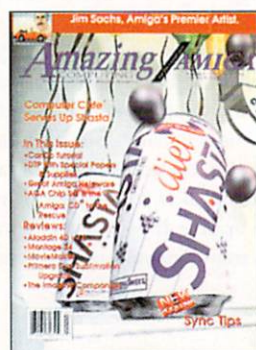
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 "Magic Lantern" A new animation compiling program for all Amiga display modes, by R. Shams Mortier.
 "Get Graphic: Digital Image F/X," Using AREXX, Opal Paint, ADPro, and DeluxePaint to process images, by William Frawley.
 ALSO: Exclusive interview with Lew Eggebrecht!

Vol. 9, No. 3, March 1994

Highlights Include:

"Amiga Stars at Medical Convention", Medical multimedia on the Amiga, by Michael Tobin, M.D..
 "CanDo vs. HELM," Head-to-head review of two leading Amiga authoring systems, by Randy Finch.
 "PD Update," This month, a description of AlertPatch 2.9 and other shareware and freeware utilities, by Henning Vahlenkamp.
 "Scala MM300," A review of the program believed to be "hot stuff" for anyone doing interactive media work, by R. Shams Mortier.
 ALSO: And furthermore: The Amiga takes the stage in the Broadway production of The Who's Tommy!



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"Comeau Computing's C++," A review of this great new C compiler by Forest Arnold.
 "Programming the Amiga in Assembly Language Part 5," by William Nee
 "Make Your Own 3D Vegetation," Laura Morrison shows how to use iterated functions to create 3D trees and plants.
PLUS! The HotLinks Developer's Toolkit ON-DISK!

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"Olé," An arcade game programmed in AMOS BASIC, by Thomas J. Eshelman.
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 "Wrapped Up with True BASIC," Text and Graphics wrapping modules in True BASIC, by Dr. Roy M. Nuzzo
 "ARexx Disk Cataloger," An AmigaDOS manipulator that produces a text file containing information about the floppy disks you want cataloged, by T. Darrell Westbrook
AND LOTS MORE ON DISK!

AC's TECH, Vol. 3, No. 3

Highlights Include:

"Rexx Rainbow Library," A review by Merrill Callaway
 "Programming the Amiga in Assembly," by William Nee
 "All You Ever Wanted to Know About Morphing," An in-depth look at morphing for Imagine by Bruno Costa and Lucia Darsa
 "Custom 3D Graphics Package Part I," Designing a custom 3D graphics package by Laura Morrison.
 "Build a Second Joystick Port," A simple hardware project for an additional joystick port by Jaques Halley.
AND LOTS MORE ON DISK!

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 "Time Efficient Animations," Make up for lost time with this great animation utility by Robert Galka.
 "F-BASIC 5.0," A review of this latest version of F-BASIC by Jeff Stein.
PLUS: CD32 Development Info!

AC's TECH, Vol. 4, No. 1

Highlights Include:

"Artificial Life," Artificial life, intelligence and other technical tidbits in this piece, by John Iovine.
 "Huge Numbers Part I," Creative number crunching, by Michael Greibling.
 "Pseudo-random Number Generation," Generating sequences of random numbers—almost, by Christopher Jennings.
 "Draw 5.0," Door prize selection in AMOS Professional, by T. Darrell Westbrook.
 "Programming the Amiga in Assembly Language," Complex functions are explored, by William P. Nee.
 "Writing a Function Genie for Pro Draw," Create a calendar beginning October 1582, by Keith D. Brown.

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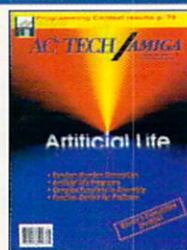
**BACK ISSUE
SPECIALS!
SEE PAGE 80
FOR DETAILS**

Complete selection of Amazing Computing and AC's TECH AVAILABLE!

WHAT HAVE YOU BEEN MISSING? Have you missed information on how to add ports to your Amiga for under \$70, how to work around *DeluxePaint*'s lack of HAM support, how to deal with service bureaus, or how to put your Super 8 films on video tape, along with Amiga graphics? Do you know the differences among the big three DTP programs for the Amiga? Does the ARexx interface still puzzle you? Do you know when it's better to you use the CLI? Would you like to know how to go about publishing a newsletter? Do you take full advantage of your RAMdisk? Have you yet to install an IBM mouse to work with your bridgeboard? Do you know there's an alternative to high-cost word processors? Do you still struggle through your directories?

Or if you're a programmer or technical type, do you understand how to add 512K RAM to your 1MB A500 for a cost of only \$30? Or how to program the Amiga's GUI in C? Would you like the instructions for building your own variable rapid-fire joystick or a 246-grayscale SCSI interface for your Amiga? Do you use easy routines for performing floppy access without the aid of the operating system? How much do you really understand about ray tracing?

**The answers to these questions and others
can be found in
AMAZING COMPUTING and AC's TECH.**



Perhaps the most impressive element of this game is the graphics. They are sharp, clear, and take full advantage of the AGA chips. Gameplay is slow and often times confusing. It can quickly become difficult to keep track of your diggers.

The game starts by picking a race of diggers and a zone in which to start your digging. Once a zone has been completely mined, either by your crew or your competing crew, you move on to another zone. As long as you have diggers alive, it is possible to move on to other zones. The more zones you can successfully mine, the more wealth you will gather.

Fire Force

Fire Force is a sophisticated military shoot-em-up in which you take the role of a commando on a special mission. There are four different missions from which to choose. You are given an assortment of weapons which help along the way. When you kill off an enemy soldier, it is also possible to take his weapon and add it to your arsenal.

Play here is slow. When your commando is dropped off, invariably he starts with a dagger as his weapon. It is necessary in most cases to change this weapon immediately or be killed. The few seconds it takes to go to select the necessary weapon from your arsenal is quite often enough time for the first enemy soldier to approach and attack you, which frequently leads to your death. Although it takes quite a few hits for you to be killed, you only get one life. Once you are dead that's it, time to start all over.

One of the first screens you are presented with allows you to select a commando for battle. Here is where it gets confusing. All of the commandos on the screen are either dead or retired, making them unusable. The option you have here is to either select an existing soldier or enter a name for your own. It is not possible to select an existing soldier until you have created a few good men. From there, you select a mission and arsenal and move on to play. Control is lacking. This game would be better served by a joystick instead of the pad. Your commando can jump, crawl, duck, and climb. Shooting control is difficult in any position other than standing still. Also, your opponents appear to have the ability to fire faster than you, which puts you at a distinct disadvantage.

Most shoot-em-ups are fast moving and feature rapid or continuous fire capabilities. This game may be sophisticated but by no means is it fast-action. It would be nice to think that the inability to get through the first level of any of the scenarios does not bias this review but the fact remains that it is extremely difficult to accomplish this. Perhaps it would be more enjoyable if the speed were increased along with the number of lives you are allowed.

Lock-N-Load

Lock-N-Load is a collection of public domain and shareware games designed for use on CD³², CDTV, A570, or any external SCSI CD-ROM drive. There are nearly 1000 games all together. There are some drawbacks to this disk. Not all of the games are 2.04 or 3.0 compatible. Some require specific Kickstart versions or extra memory to operate. This will cause a problem on CD³² machines. Many of the games require a keyboard for certain functions. Also, of the thirty or so games tested, all required that the machine be reset in order to quit. This may be different on CDTV or on an external CD-ROM device.



Keep in mind that the games are public domain and shareware items. Many have the PD look and feel. This is truly a great collection, but CD³² owners should beware that not all of the software on the disk will be easily accessible. This is perhaps best suited for players with an external CD-ROM or a CDTV equipped with a keyboard and mouse.

•AC•

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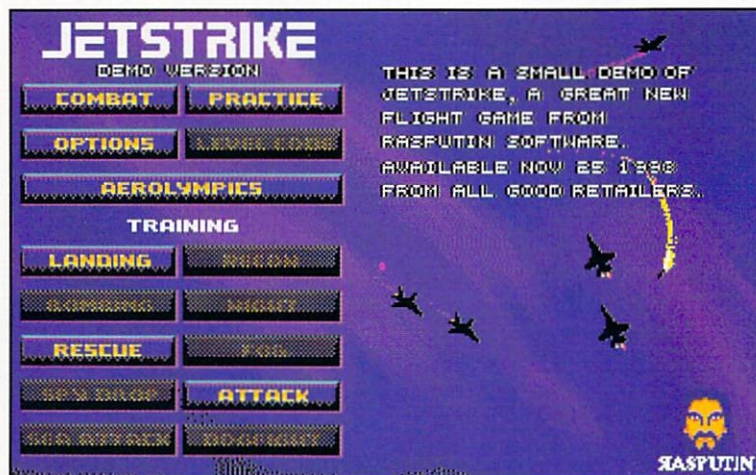
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Coming Attractions...

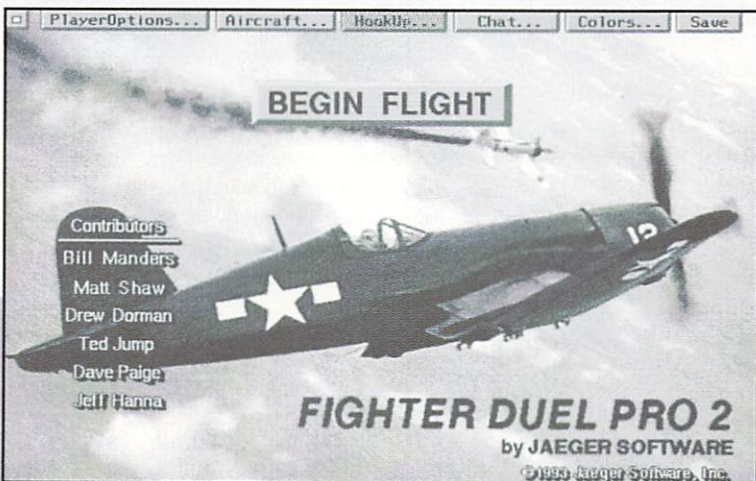
by Henning Vahlenkamp

IT'S TIME FOR ANOTHER sneak peek at more new Amiga games. All of these games are either available now or should be available soon. Since demo copies were evaluated for this article, some features or specifications may be subject to change.



Fighter Duel Pro (FDP) fans, rejoice; *FDP 2* (Jaeger Software), the sequel to that acclaimed game, is now available. All the great features of its predecessor (*AC V8.2*) are still here, and there are a raft of new ones. Topping the list is support for 640x400 DBLNTSC or DBLPAL screenmodes on AGA Amigas, eliminating interlace flicker and boosting graphics speed. Other improvements include nine more planes, a slick new pre-flight interface, realistically depicted bullet trajectories, and two player modes where one player acts as pilot and the other as gunner! The memory ante has been raised to 2MB, and *FDP 2* can exploit faster processors too. Full 256-color support seems to be the only thing missing in this superior flight simulator - perhaps in the next version.

SPUDD (the Society of Particularly Undesirable Dastardly Dudes) is planning to take over the world, and you as a top agent must fly secret missions against their forces before they have a chance to carry out their evil deed. Yes, that's actually the plot of *Jetstrike* (Rasputin Software). Tongue-in-cheek plot aside, the 135 available missions range from taking reconnaissance photos to catching falling spies. The large selection of 40 different aircraft includes a dragon for good measure! Getting the hang of flying takes some practice, making the training missions a welcome



Above Left: Rasputin's *Jetstrike*.

Left: *Fighter Duel Pro 2* from Jaeger Software.

Opposite Top: *Quack* from Team 17.

Opposite center: *Seek and Destroy* from Vision Software.

Opposite bottom: Entertainment International's *Magic Boy*.

feature. Even if you don't succeed in a mission, it's fun simply to crash your plane into the side-scrolling scenery to see the great efforts the programmers lavished on this sequence.

In *Magic Boy* (Entertainment International), you, as a wizard's apprentice, must rescue your mentor by progressing through multiple platform worlds with eight levels each. Since it was designed for young players, the challenge isn't too great, and the few almost-too-cute-to-kill enemies follow very predictable paths. Making use of lots of rainbow backgrounds, the graphics certainly are cheery and colorful. The music sounds as though it was lifted from a "Popeye" cartoon.

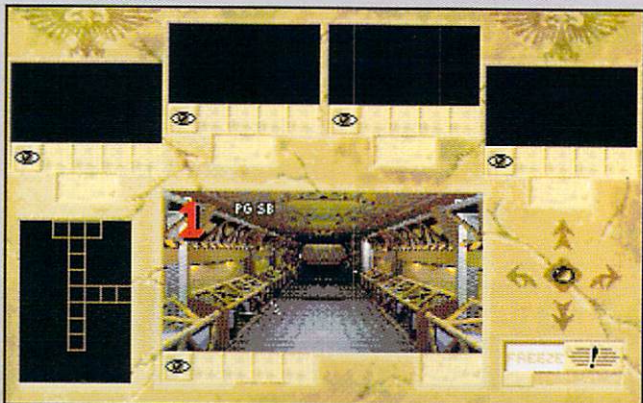
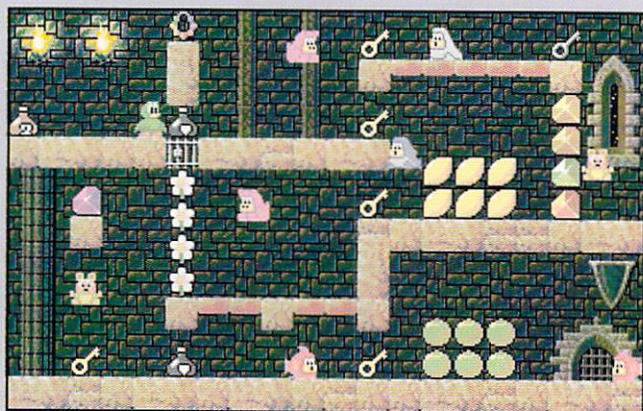
Oryland (Magic System) is a graphic adventure in a similar vein as many Sierra games. The demo takes place in a countryside, but doesn't give any clue about the plot, or the game's unusual name, for that matter. As in the newer Sierra interface, there is a panel of icons from which you can control things simply and effectively. It's obvious from the demo that *Oryland* has some rough edges in need of smoothing; your character can't walk around simple obstacles when you click on a destination on the screen, and the text suffers from glaring grammatical errors. The graphics also appear a little rough, while the heavy, industrial music seems out of place.

Qwak (Team 17) is a basic Nintendo-esque platform arcade game. As you may have guessed from the name, the main character is a duck, and he needs to collect all the keys on each screen-size level to escape to the next one. Of course all the requisite power-ups (fruit, gems, etc) are here, and, naturally, his weapons of choice are eggs. Plentiful enemies and many randomly falling objects can make *Qwak* pretty darn difficult. Especially well-tailored to the game, the music, which somehow suggests synthesized singing ducks, is better than the fair graphics. Simultaneous two-player action makes it more interesting, though.

Seek and Destroy (Vision Software) is exactly the name of the game in this exciting shoot-em-up. From your Apache helicopter, you'll fly various missions to defeat the enemy forces, usually involving the decimation of military installations and hostile helicopters. The technical highlight here is the overhead view scenery which spins around 360 degrees depending upon how you move your onscreen Apache. Lots of digitized speech, such as "Finish 'em off!" when you're doing well and "We're going down!" when you're not doing so well, compliments the frenzied firefights that often erupt. Quite a bit of fun.

A combination of *Populous* and *SimCity*, *The Settlers* (Blue Byte) seeks to recreate a quaint medieval world. Your task is to build your kingdom while thwarting your computer-controlled opponents who try to build their own. As in similar games, a great deal of strategy is involved to manage your resources, build efficiently, and keep things on track. Your kingdom doesn't evolve culturally or technologically, and you don't really have any awesome godly powers, so it's necessary to think in more down-to-earth terms. There are a huge number of options arranged in a convenient icon interface. Everything is presented well, especially the intricate animation of the tiny settlers going about their lives. This one looks like a winner.

Space Hulk (Electronic Arts) is a derelict ship that was lost through warp space travel. These derelicts sometimes return to real space, but with nasty creatures called Genestealers aboard as stowaways. As heavily armed Space Marines, your team's job is to exterminate these aliens. The game's main interface is a set of five windows through which you can see the inside of a space hulk in a



first person perspective, one window per Marine. Basically you directly control one Marine, and command the others. Although a freeze button gives you time to issue commands, that time is unfortunately short. Graphics are a bit grainy. On the whole, *Hired Guns*, offering true multi-player support, is similar, but better.

•AC•

Please Write to:
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Fall River, MA 02722-2140

DIVERSIONS

Dune II: The Building of a Dynasty

by Jeff James

Although its first attempt at bringing Frank Herbert's epic science fiction novel of sand worms and guild navigators to the computer screen met with limited success, Virgin Games returns once again to Arrakis with the release of *Dune II: The Building of a Dynasty*. For this second Dune game, Virgin pooled its resources with veteran game developer Westwood Studios (*Eye of the Beholder*, *Legend of Kyrandia*) to create a product with a stronger emphasis on wargaming. In *Dune II*, the player's goal is to raise the battle standard of one of three sides—called "Houses" in Dune parlance—and use the

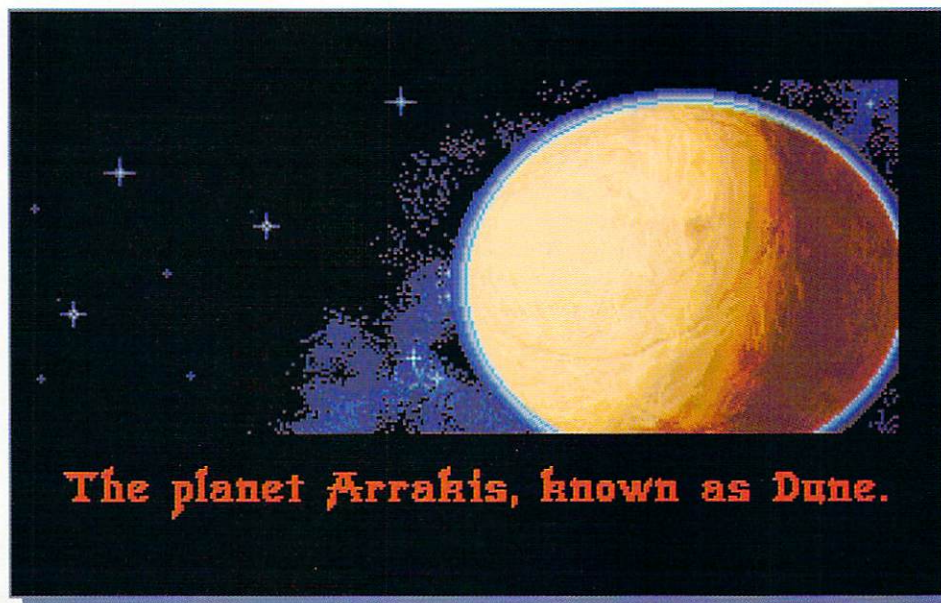
resources of the selected House towards the conquest of the planet Arrakis. Unlike the original Dune books and movies which cast House Atreides as the protagonist, the player can pledge allegiance to the brutal Harkonnens or the Machiavelian Ordos.

Unlike conventional wargames that employ a rigid turn-based style of gameplay, *Dune II*—the first installment in Westwood's new "Command and Conquer" product line—throws everything at the player in real-time. Nine missions are included, each progressively more difficult than the last. In terms of

gameplay, *Dune II* plays like an addictive blend of *SimCity* (Maxis) and *The Perfect General* (QQP), laced with a strong dose of the Dune ethos. Like *SimCity*, *Dune II* requires you to don the hard-hat of a city planner, using an attractive mouse-driven interface to create a wide variety of useful structures. Concrete slabs serve as the foundation for other buildings: wind traps provide water and power, while refineries are used to convert harvested spice into credits. Once you tire of building boring civilian structures, *Dune II* allows you to trade in that dented hard-hat for a worn battle helmet, allowing you to construct a wide range of military edifices—including barracks for your soldiers and tank-production facilities.

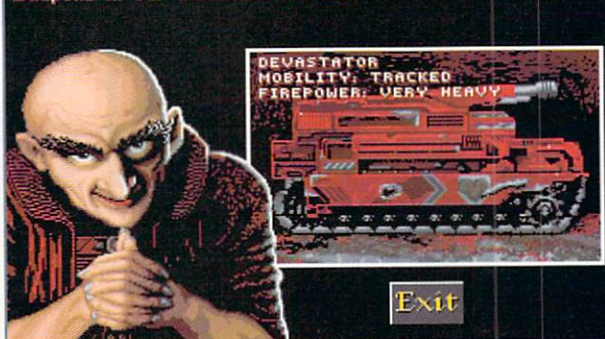
All three Houses share the ability to build certain standard units, such as harvesters, trikes, quads, carryalls, combat tanks, and siege tanks. In addition, each House can construct several unique items. House Harkonnen can produce the Devastator, a nuclear-powered combat tank. House Ordos is able to construct the Deviator, (a missile tank armed with nerve-gas-tipped warheads) while House Atreides can employ the Sonic Tank (which uses focused sound waves to destroy enemy structures and vehicles). Regardless of the House you choose to play, learning to master both the military and resource management aspects of the game is essential to victory.

In order to make *Dune II* small enough to run on 1MB Amigas, Westwood had to eliminate some of the digitized speech and sound found in the IBM version. The speech and sound effects that do remain are still of excellent quality, although the background music is rather, well, boring. Thankfully, music can be toggled on and off by accessing a game options control screen. *Dune II* doesn't look like an IBM-port, with responsive gameplay and crisp, colorful graphics. The game evinces an eye for detail, too: moving tanks leave tiny tracks in the shifting sand, and friendly units can accidentally damage and destroy each other in a pixelized version of "friendly fire." ➔



The planet Arrakis, known as Dune.

The Devastator is another of the unique and powerful weapons in our awesome arsenal.

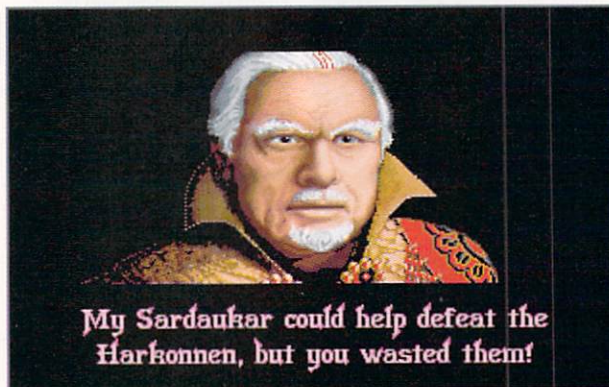


Dune II does support a hard-drive, and will multi-task if you have enough free RAM on your system. The program operates a trifle sluggishly on slower machines, although owners of accelerated Amigas are treated to quick, responsive gameplay in all but the most cluttered of on-screen battles. Strangely, support for modem and serial-link play—nearly de rigueur in wargames nowadays—is conspicuous by its absence, as is support for the 256-color AGA chip set found in the Amiga 1200/4000. The included Amiga addendum card is rather short on information, (although the 50-page instruction manual is filled with helpful hints and playing advice) and the included hard-drive installation program is scarcely documented at all.

If most of the aforementioned gripes sound as if I'm picking nits, you'd be right. There simply isn't much not to like about Dune II. Most of these quibbles will be addressed when the second

game in Westwood's Command and Conquer series is released sometime in 1994. At press time, Westwood hadn't decided whether or not to release an Amiga version of that game, although a version for the CD32 may be in the offing. I can't help wishing that Westwood would also consider a CD32-specific version of Dune II, filled with the extra digitized sound and music found in the IBM version of the game. Although it's not without flaws, Dune II is undoubtedly one of the best PC to Amiga game conversions to hit the shelves in quite some time. An addictively playable wargame placed in a futuristic, sand-swept tableau, Dune II will undoubtedly add some spice to your Amiga game library.

Dune II
Westwood Studios
5333 South Arville, Suite 104
Las Vegas, NV 89118-2226
702-368-4850
Inquiry #226



Body Blows Galactic

by Jason D'Aprile

In the world of fighting games for the Amiga, the *Body Blows* series is definitely tops—no doubt. After playing the original *Body Blows* until I could play it no more, I was excited about the impending release of this sequel and with good reason. As of now, *Body Blows Galactic* is the only Amiga fighting game in town.

With twelve characters, only two of which are from the first (Dan and Junior have returned), science fiction worlds as the backdrops, and a variety of different characters that is quite stunning, BBG is something to behold. No more of the clone syndrome that the original *Body Blows* suffered from, these characters are really something.

The graphics are nicely done in the same cartoony style of *Street Fighter 2*, particularly Kai-Ti who is sort of a revamp of the original's Maria and has a much improved graphic look. The joystick control is the same as the original, which, while very responsive, I found disappointing on a number of levels. Hold the button and press in any of the eight directions for any number of very cool attack moves, just hold the button in for a second or two and the character activates his or her special move. This system is great for combos, but proves extremely annoying during certain situations.

The biggest complaint I have about this system is it is rather primitive to still use a single fire button controller, especially with a fighting game. Compare these characters' twenty moves each with any of the other fighters

out there with hordes more moves and you'll know that something's not right. In the least, separate kick and punch buttons would have almost doubled the move potential and provided more fighting enjoyment. In the upcoming CD32 versions, I hope that Team 17 will rightly take advantage of the six button controller, then they really would have a main contender in the fighting arena.

Another note about the joystick control is that a high block requires the button pressed and the joystick held back, while low blocks simply require the joystick held back. T17 should have followed the *Street Fighter 2* method of just pressing back for a block, because, inevitably, right as Phantom is about to start his Super Swoop special move, I'll try to block and instead of pressing straight back, I'll accidentally hit a diagonal, my character will perform an attack move and, consequently, get his butt kicked across the screen.

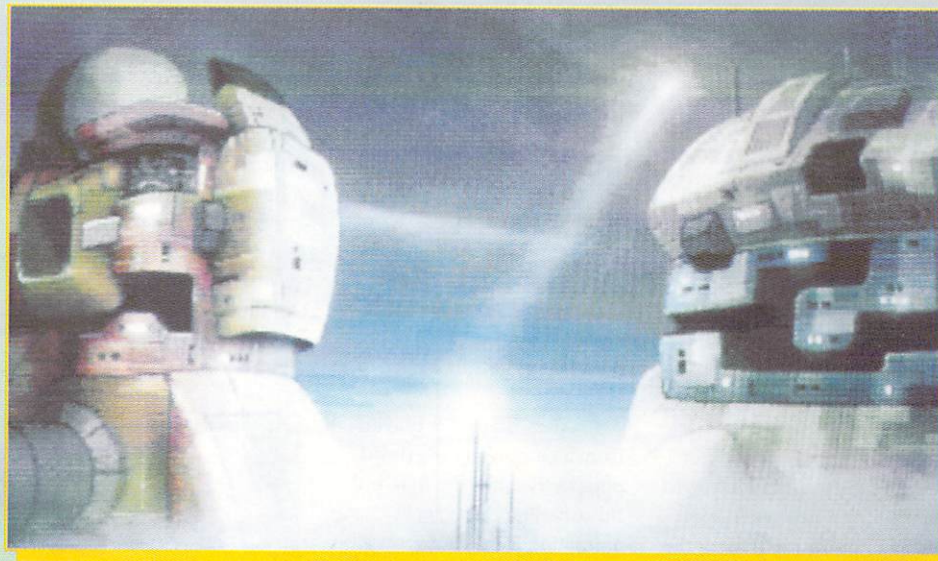
It's not a very pretty sight, suffice to say, and I don't enjoy it when this happens. Also, the power bar, which has to power up before you can perform the character's special move, lengthens each time you use the special power, which makes it rather precarious to attempt it, even though the computer uses its special move like there's no tomorrow.

Instead of having to choose from just four (three actually) characters as with *Body Blows 1*, you can choose any of the twelve to fight through the game, which is great. I thought wow! 12

characters, finally, something to match the other fighters on my favorites list. And I was happy, too, until I started to complete the game with the different characters.

This game, despite the manual, has no end boss and it has no ending sequences. When you win, with any character, all the game displays is a close up of your fighter and a big "Congratulations!" I wanted to cry when I saw that, but thought, no it must be a mistake.

Aside from the anticlimactic endings, the sometimes annoying control mechanism, and the fact that I would have liked to have seen larger characters, I enjoyed Body Blows Galactic as a straight forward fighting game. I don't imagine that the genre on the Amiga will be improved beyond this. The characters are all very imaginative. However, I wish that some fictitious backgrounds on all the characters were included, to make the game seem more familiar. All the backdrops and the character graphics are drawn extremely well and the sound effects are also suitably brutal. Like the first, it features not just the straight arcade, one player challenge, but two player versus and tournament mode which allows several



Amiga players to battle it out in a fight to the finish.

There are sensible options to customize the game, like turning off the timer and setting the matches to one or three rounds, which is great if you just want to play through a quick game. The game takes place in six different "planet" locations, where you will fight each of the planet's two, drastically different, champions.

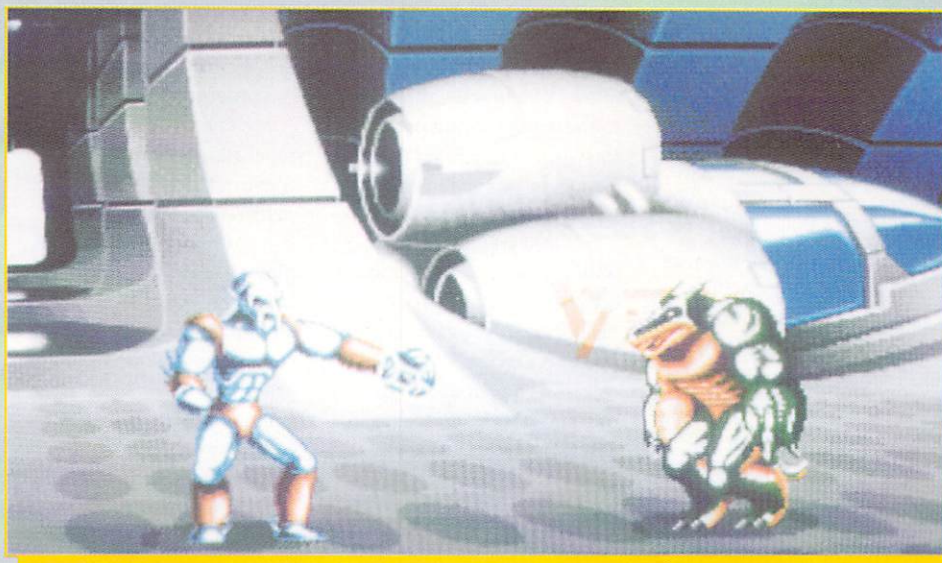
If you're a fighting fan, looking for a properly done Amiga version of the genre, then this is as good as it gets, despite its flaws. The twelve characters make it the largest

fighting game (to my knowledge), aside from *Street Fighter2: Turbo* on SNES, that is available on a home machine, and adds greatly to play value.

Still though, in the manual to the first Body Blows, Team 17 tells us that they checked out all the other fighters available for the Amiga. Well, they were looking in the wrong place. They should have gone to the arcades to check out the competition, because that's where it's at. The Amiga was the original high tech arcade machine and there's nothing any other console machine can do that it can't.

I don't want to seem too

harsh to Body Blows Galactic. It's greatly improved over the first, packed with digitized voice, great looking characters, cool moves, interesting backdrops, and challenging fun. Fighting games are my favorite genre of games and a good deal of that affinity comes from the fact that designers of these games put a lot of effort into making the games a kind of interactive story, as if these characters actually had something to do, someplace to go, and fighting was going to get them there. It's just a good thing that in Body Blows Galactic getting there is fun enough to overcome the disappointment of actually arriving.



Body Blows Galactic
Team 17
Marwood House,
Garden Street
Wakefield, West Yorkshire
WF1 1DX England
Tel: 0924 201846
Inquiry #227

Alien Breed 2

by Jason D'Aprile

Alien Breed 2 is likely to be one of the biggest Amiga releases of the new year and it's not hard to see why. The sequel to the hugely popular and excellent *Alien Breed* Special Edition, AB2 is essentially the same as its predecessor, only better. For those who aren't familiar with the first, or this sequel, *Alien Breed 2* has basically the same plot as the movie *Aliens*. Nine years after the main characters of *Alien Breed* cleared out an alien infested outer space research center, a distress call from a Federation colony on planet Alpha-Five leads the Inter Planetary Corps (or IPC) to send out one, or two marines, from a group of four

different characters, to investigate. Sure enough, the planet is knee-deep in alien infestations, along with the system's own automatic defense systems that have gone awry.

Alien Breed 2 is played from a completely overhead perspective, like the first, but this time the character animation is much improved over the original—on par with the Bitmap Brothers' *Chaos Engine*. The graphics in the game are absolutely stunning and the atmospheric sounds are just as perfectly done. Control involves a combination of using the joystick (to control your character and fire your weapon) and keyboard

(to activate computer terminals, map systems and to change weapons) and is also excellent.

As with the original, in AB2, the characters go through a huge complex, perform certain tasks, then rapidly leave the level before the self-destruct sequence runs down. All the while they're dealing with not only a myriad of

different alien creatures, but the outpost's insane computer defenses. On all the levels, there are always supplies, such as money, ammo, keys and first aid to pick up and utilize.

Unfortunately, *Alien Breed 2* is definitely far from a perfect game. The characters, when you first start the game, each have certain supplies that



Discovery: In the Steps of Columbus

by Jeff James

Released to roughly coincide with the 500th Anniversary of Columbus' fateful 1492 ocean voyage, Impressions' *Discovery: In the Steps of Columbus* allows you to personally discover the New World. It's all here. From funding the construction of your first sailing vessel to trading with Native Americans, *Discovery* offers an intriguing look at the events which led to the discovery and colonization of the Americas.

Play begins with the gamer choosing a game type, selecting a nationality, and then purchasing the sailing vessels needed to discover the New World. Eight different ship types are available for

purchase, ranging from a tiny merchant vessel to a wallowing Man o' War, bristling with cannon and musket-wielding soldiers. Ships can be ordered about by a simple mouse-click, and can be given a variety of movement orders. *Discovery's* playing interface does a laudable job of mimicking the curvature of the Earth's surface. Ships sailing towards the top of the screen will gradually disappear over the horizon, revealing only the tips of their sails before vanishing. When one of your ships discovers land, you can plant your colors and be the first to colonize the New World. Your first settlements will be ports. Using the

mouse, you can direct the settlers that soon appear to perform a variety of tasks, including colonizing new land, building bridges and exploring new territory. Certain goods can be grown (corn, sheep, pigs, etc.) or mined (gold, iron, silver, etc.) near your settlements, perfect for trading with nearby villages and local natives. Finally, a trading screen allows you to sell your goods to the major trading ports of the world, including London, Genoa, Istanbul, and other large markets.

Once you tire of trading with your opponents, you can achieve your objectives the old fashioned way: by blood-thirsty conquest! When you do choose to match wits and muskets with your enemies, *Discovery* gives you two outlets for your aggressive tendencies: sea and land combat. When two hostile ships meet on the open sea,

the action shifts to a sea battle screen. All the ships involved in battle are displayed, along with a healthy number of combat options. Possible actions include boarding the enemy vessel, opening fire with cannon, and attempting to negotiate. If all else fails you can turn sail and attempt to outrun your enemy, although a ship laden with cargo won't flee very quickly. On land, you can order your soldiers to attack enemy settlements, repel attacks from natives and construct forts for a superior defensive posture.

Although combat does play an important role in *Discovery*, the game does attempt to cling—albeit somewhat tenuously—to the actual historical events of Columbus' discovery of the New World. Occasionally the game will pause to display an informative screen of text and graphics, informing you of a historical event which

come with them, but that's about the only variation between them and it's not much of one.

In addition, the game won't let the characters negotiate through tight spaces, even when it looks as if they could get through. This defect is extremely annoying when you're surrounded by hungry, homicidal aliens and is a kickback defect from the first Alien Breed. I didn't like it then and I really hate it now. Fortunately, such tight negotiations are not prevalent throughout the game.

This flaw, however, really adds up in two player mode. As with the first, this game is extremely troublesome in two player mode. In AB2, the characters keep getting in each other's way. The game also tends to suffer because it is a sequel with little in the way of improvements that are anything more than

cosmetic; the new faces and new places just didn't make me feel like I was playing anything that felt new, as the first did.

Aside from two brief outdoor levels, the whole game, essentially, looks just like the first. It's not much longer than the first. It actually felt shorter, because I found it so easy to win. I won't go so far as to say that the game is easy—it isn't. However, I was able to win Alien Breed 2 in about three days on the normal level and didn't find much of a difference between the two difficulty levels of the game, except that the bosses were harder to kill on expert level. Without a doubt, I expect AB2 to provide a great deal of challenge and thrill for any gamer.

There are only two "boss" creatures in the game, and on top of that, one of the two bosses is not even an

alien, but an oversized rotor that spins around the room! The other major disappointment was the ending. Let me first note that Alien Breed Special Edition had the absolute worst ending I have ever

seen. It's all text and actually insults the player for not cheating to get through it.

Now, since AB2 is not a budget title, I made the wrong assumption when I thought this horrible ending trend was simply a fluke. Alien Breed 2's ending is not quite as bad as the first, though; at least you get to see the tail end of a spaceship flying in the clouds.

Alien Breed 2 also works on the most miserly password system I have ever encountered. Remember Chaos Engine's very particular,



character sensitive, only after the completion of a complete world password system? Well that's generous compared to AB2's. There are about fifteen levels in the game and, count 'em, there are a grand total of two passwords.

On the other hand, although I haven't found any yet, I'm betting that there is a bucket load of cheat codes for the game, which always adds to diversity. Also, I am extremely grateful to Team 17 for leaving out the hideous Fire Doors from Alien Breed Special Edition. These nightmarish blockades would irreversibly trap you in the first game and were quite despicable. In addition, ammunition is thankfully given with a much greater degree of generosity here, so it's doubtful that you'll run out of bullet rounds.

Even with the faults I have laid out, Alien Breed 2, as a whole, is an excellent game. In the two player mode, it certainly has a great deal of play value. Also, I find myself waiting with great anticipation for the upcoming CD³² versions of both AB2 and the first Alien Breed.

occurred on the same date as the current year in game time. In addition to those edifying animated segues, Discovery's 87-page instruction manual offers a great deal of meaty historical information on Columbus and his accomplishments. Although the first half of the manual is devoted to the usual game manual topics, (i.e., game tutorials, objectives, etc.) the last half is filled with over forty pages of historical information, with topics ranging from the negative impact of colonization on Native Americans to the exploits of Cortez and Erik the Red. It isn't quite National Geographic, but Discovery's manual is a good read nonetheless. A 17-page technical supplement and a map entitled "The Journeys of Columbus" round out the package contents, providing installation advice and an overview of Columbus' voyages, respectively.

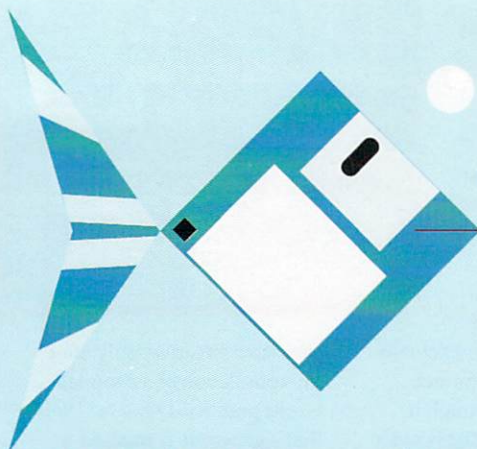
Discovery ships on one diskette, and does support hard drive installation. Unfortunately, the installation program only recognizes dh0:, dh1: and dh2: as valid hard drive volumes, forcing some Amiga owners—including this reviewer—to break out a trusty text editor and manually edit the installation files. I did manage to install Discovery on my A1200, but it would only boot from hard disk when I turned off CPU caches, selected a NTSC display and the ECS chip set from the A1200's early startup control panel. Granted, Discovery has been available for the Amiga for quite some time, making it unlikely that Impressions had newer Amigas in mind when Discovery was released. Nevertheless, updating the program with an improved hard drive installation utility and 256-color AGA chip set support would go a long way

towards making Discovery a more attractive purchase for Amiga 1200 and 4000 owners.

With Discovery, Impressions has attempted to straddle the entertainment and educational sides of the computer software fence with one product. Unfortunately, the product serves neither category well. If you're keenly interested in the colonization of 16th Century America, Discovery won't disappoint. However, gamers looking for a more gut-wrenching gaming experience may want to sail past Discovery and pick up a copy of Impressions' Caesar instead.

Discovery: In the Steps of Columbus
Requirements: 1 MB RAM
Impressions Software
7 Melrose Drive
Farmington, CT 06032
(617) 225-0848
Inquiry #228

Alien Breed 2
Team 17
Marwood House,
Garden Street
Wakefield, West Yorkshire
WF1 1DX England
Tel: 0924 201846
Inquiry #229



THE Fred Fish Collection

Below is a listing of the latest additions to the Fred Fish Collection. This expanding library of freely redistributable software is the work of Amiga pioneer and award winning software anthologist, Fred Fish. For a complete list of all AC, AMICUS, and Fred Fish Disks, cataloged and cross-referenced for your convenience, please consult the current *AC's Guide To The Commodore Amiga* available at your local Amazing Dealer.

Fred Fish Disk 946

AmiQWK QWKMail format offline message system. Allows reading of QWKMail format offline message packets popular with many bulletin board systems (BBSes). Replies can be edited using any text editor and packed for transfer at a later time. AmiQWK has been tested with many QWKMail systems for IBM and Amiga based BBSes. Requires Workbench 2.04 or higher. Release 2 version 2.2, an update to Release 2 version 1.0 on disk number 907. Binary only, shareware. Author: Jim Dawson

DMon DMon is a multi-purpose utility written for the author's personal use during program development. It is a Monitor, Disassembler, Debugger and development system. You may find similarities to Amiga Monitor by Timo Rossi, but DMon is different, it can disassemble and debug 68xxx software in User and Supervisor Mode. If you do not know what that means, then do not use DMon! Version 1.86, binary only. Author: Andreas Smigielski

fd2pragma A small utility to create prototypes for the Aztec C compiler or the Aztec Assembler from FD files as they are distributed from Commodore with the Include files. Includes C-source. Author: Jochen Wiedmann

PriMan A configurable, Style Guide compliant task priority manager. Along the same lines as TaskX, PriMan is font-sensitive, resizeable, uses a slider gadget to change the priority of any task, and has buttons for sending a Ctrl-C signal to a task, or removing it from memory. Version 1.1, an update to version 1.0 on disk number 928. FreeWare, includes C source. Author: Barry McConnell

TrashIcon A WorkBench 2.x application icon to delete files. Puts an icon at a user defined position on the WorkBench screen, then deletes all files that are dragged onto it. Version 2.3, an update to version 1.4 on disk number 871. Binary only. Author: Mark McPherson

Yass Yet Another Screen Selector, a commodity with several nice

features such as: Completely controllable via keyboard (of course you can use your mouse, if you really want to); Shows Screens and Windows (option); Shows PublicScreenname or ScreenTitle (option); Ability to change the default Public screen; Opens window even on non-public screens (option). Font-sensitive; Resizeable window. Version 1.1, binary only. Author: Albert Schweizer

Fred Fish Disk 947

Mand2000D Demo version of a revolutionary fractal program that makes it far easier to explore the Mandelbrot set. Mand2000 is compatible with all Amigas. It has separate calc routines that have been optimized for the 68000, 68020, 68030, 68040 and 68881 processors respectively. It automatically detects these to ensure maximum performance. Mand2000 also makes full use of AGA graphics when available. A number of enhancements since the original demo version. Version 1.102, binary only. Requires OS 2.04. Author: Cygnus Software

NewTool A program that will quickly replace the default tool in project icons. You can specify the tool to use, use a file requester to pick the tool, or allow NewTool to automatically choose the proper tool depending on the file type. Version 37.195. WB 2.0+ required. Binary only. Author: Michael J Barsoom.

ScreenSelect A commodity to change screen order by selecting a screen name from a listview. Also allows binding of hotkeys to any screen with a proper name. Supports automatic activation of windows (remembers last activations) when changing to new screen, is configurable with Preferences program, has a full intuition interface and is font sensitive (including proportional fonts). Documentation in AmigaGuide, ASCII and DVI formats. Requires AmigaOS 2.04 or later. Version 2.1, an update to version 2.0 on disk number 915. Binary only, freeware. Author: Markus Aalto

SMAus A highly configurable "SUN-mouse" utility, implemented as a commodity with a graphical user interface. It activates the window under the mouse pointer if you move or after you have moved the mouse or if you press a key. You can specify titles of windows which shall not be deactivated using wildcards. Requires at least AmigaOS 2.04, uses locale.library if available. Includes english and german docs, german and swedish catalog file (english language built

in). Version 1.24, an update to V1.17 on disk 868. Shareware, binary only. Author: Stefan Sticht
SteamyWindows A small yet very useful commodity that increases the priority of the owner task of the active window, and restores the task's priority when the window becomes inactive unless someone else modified the task's priority meanwhile. This is version 1.0, includes source in Oberon-2. Author: Franz Schwarz

Fred Fish Disk 948

ADis A 68000+ disassembler which can automatically recognize data and strings put into the code segment. It also generates only those labels that are really referenced. The generated file will often be reassemblable. In V1.1, ADis is capable of recognizing all 68020 and 68881 instructions even with the 68020's extended addressing modes. ADis will also try to resolve addressing relative to a4, which many C compilers use in a small memory model. Version 1.1, binary only. Author: Martin Apel

Snoopy Enables you to monitor library function calls of any library you wish. The idea of course came from SnoopDos by Eddy Carroll, but Snoopy is different in approach and purpose. Snoopy has no specific patches for specific functions it is an all-purpose tool to monitor "ANY" library call in "ANY" system library. Version 1.4, includes assembly source. Author: Gerson Kurz, FH Muenchen

VirusZII Release II of this popular virus detector that recognizes many boot and file viruses. The filechecker can also decrunch files for testing. The memory checker removes all known viruses from memory without 'Guru Meditation' and checks memory for viruses regularly. VirusZ has easy to use intuitionized menus including keycuts for both beginners and experienced users. Release II versions of VirusZ require OS2.0+. This is Release II Version 1.00, an upgrade to Release I version 3.07 on disk number 902. Binary only, shareware. Author: Georg Hörmann

Fred Fish Disk 949

BBBBB Baud Bandit Bulletin Board System. Written entirely in ARexx using the commercial terminal program "BaudBandit". Features include up to 99 file libraries with extended filenotes, up to 99 fully threaded message conferences, number of users, files, messages, etc. are only limited by storage space, controlled file library and message conference access for users and sysops, interface to extra devices like CD-ROM and others, all treated as read only, complete

Email with binary mail and multiple forwarding, user statistics including messages written, files uploaded or downloaded, time, etc, plus much more. Now includes a complete offline reader/answer called bbsQUICK.rexx, and Call Back Verification for local callers. Version 6.5, an update to version 5.9 on disk 883. Includes complete ARexx source. Author: Richard Lee Stockton

TitleClock A little commodity (about 3k) that throws up a clock in the top right corner of a screen's titlebar. It may be set up to display itself on one or more screens without running multiple copies of the program. It may also be set to follow your default public screen and also to always display on the frontmost screen. Version 2.7, binary only. Author: Anders Hammarquist

Fred Fish Disk 950

BBDdoors A collection of rexxDoors adjusted to work with BBBBS 6.5. Includes complete ARexx source. Author: Richard Lee Stockton and various others.

bbsQUICK An offline read/reply/upload/download module for BBBBS. Complete GUI with support for multiple BBBBS systems. Version 6.4 and update to version 5.9 on disk number 883. Includes complete ARexx source. Author: Richard Lee Stockton

BusyPointers A collection of busy pointers for use with 'NickPrefs'. (NickPrefs can be found on disk number 780). Author: Dan Elgaard

ClockTool A simple CLI utility to perform operations on the battery-backed-up and/or system clock, e.g. display either/both, set one from the other, increment, and log. Most of these features, particularly those accessing the battery-backed-up clock, are not available using current AmigaDos commands. Version 1.0, includes source. Author: Gary Duncan

Enforcer A tool to monitor illegal memory access for 68020/68851, 68030, and 68040 CPUs. This is a completely new Enforcer from the original idea by Bryce Nesbitt. It contains many new and wonderful features and options and no longer contains any exceptions for specific software. Enforcer can now also be used with CPU or SetCPU FASTROM or most any other MMU-Kickstart-Mapping tool. Major new output options such as local output, stdout, and parallel port. Highly optimized to be as fast as possible. Version 37.55, an update to version 37.52 on disk number 912. Requires V37 of the OS or better

- and an MMU. Binary only. Author: Michael Sinz
- PayAdvice** Easy-to-use pay analysis program which is easily configured to deal with the way deductions are made from your salary. Useful for investigating just how large a slice of your hard earned cash ends up in the hands of the tax man, or to make sure that your employer isn't deducting more from your wages than he should. Version 3.00, binary only, shareware. Authors: Richard Smedley, Andy Eskelson, Robert Hart
- Sushi** A tool to intercept the raw serial output of Enforcer 2.8b, Enforcer.megastack 26.f, Mungwall, and all other tool and application debugging output that uses kprintf. This makes it possible to use serial debugging on a single Amiga, without interfering with attached serial hardware such as modems and serial printers. Sushi also provides optional signalling and buffer access to an external display/watcher program. Version 37.10, an update to version 37.7 on disk number 733. Binary only. Author: Carolyn Scheppner
- Fred Fish Disk 951**
- IconMiser** Intercepts attempts by programs to create icons and substitutes images or icons you prefer in their place. Easy to configure, works with 1.2 or above. Supports icon drag-n-drop with 2.0 or above. Version 2.0, binary only. Author: Todd M. Lewis
- MaxonMAGIC** Demoverison of the commercial program MaxonMAGIC, an animated screenblinker and crazy soundprogram. The complete version includes 15 different blankers and two disks full of samples. The demo is almost completely operational. Settings can't be saved and it will also remind the user that it is a demo every now and then. Author: Klaus-Dieter Sommer, distributed by MAXON Computer
- Fred Fish Disk 952**
- MachV** Release 5.0, version 37.5 of the hotkey/macro/multipurpose utility. You can record keystrokes and mouse events, manipulate screens and windows, popup a shell, view the clipboard, blank the screen and much more. This release has a complete AREXX interface, so you can execute AREXX programs and functions from hotkeys and store results in environment variables. The optional title bar clock is an AppWindow. You can drop an icon in the clock and its name is set in a variable for use in macros. The documentation has been rewritten and includes two indices. This is the freely distributable release of 5.0. It is the same as the registered version except this version has a "welcome" window and has a limit of 25 macros. It has been localized for deutsch and francais. Requires OS2.04+. This is an update to MachIV on disk number 624. Binary only, shareware. Author: Brian Moats, PolyGlott Software
- UUArc** UUArc is an archiving system designed to enable easy transmission of binary files/archives over communication links only capable of using ASCII, such as Electronic Mail. It encodes binary files into files containing only printable standard ASCII characters. Written primarily for use with GuiArc to add UUEncoding/ UUDecoding facilities to it, it takes similar command line options to other commonly used archiving programs. This is version 1.3, an update to version 1.1 on disk 912. Public domain, includes source. Author: Julie Brandon
- Fred Fish Disk 953**
- AmigaToNTSC** AmigaToNTSC patches graphics.library so it will think you have an NTSC Amiga. AmigaToPAL will patch it to think you have a PAL Amiga. Custom screens will open in the mode selected. Version 1.2, an update to version 1.0 on disk number 575. Binary only. Author: Nico Francois
- AppCon** Declares the actual CON- window as an AppWindow and lets you drop your icons in this window. Then, the name and path of the icon are inserted into the current command line exactly as if you typed them with your keyboard, but slightly faster! Version 37.177, includes source. Author: Stephan Fuhrmann
- ByteFilter** Lets you to filter out specified bytes from any file, so you are able to extract the texts from a binary file, for example. This is version 1.20 and it uses jhextras.library, which is included in the libs drawer. Freeware, includes source. Author: Jan Hagqvist
- EasyCatalog** An IFF-CTLG catalog file editor. From now on, you can just enter the text for the catalog and save it. Existing catalogs can be loaded and changed. Requires Kickstart 2.x or higher. English and Dutch (Nederlands) catalogs supplied. Version 0.83, binary only. Author: Jeroen Smits
- ISAM** A Server/Library. Even novice programmers can store and/or retrieve database records. Powerful, multi-"user", almost unlimited number & size of records/files. Different users may access same file, file and record locking (exclusive or shared), multiple keys/file. Keys may: ascend/descend, have unique/repeatable values, be up to 499 bytes. Many record retrieval methods. Recover Index file if lost or corrupt. Deleted record space reclaimed. Small: server is less than 51K; Resident Library less than 9K. Usable from C/Asm/AREXX/etc. AmigaDOS V1.2 and up. Shareware, binary only, examples w/source. Version 1.03, an update to version 1.01 on disk number 766. Author: Scott C. Jacobs, RedShift Software
- LHA_DOpus** An AREXX script for Directory Opus 4.11 that lists the contents of lha-archives in a DOpus window. Allows extract, delete and add operations on specific files of the archive. Version 1.0, freeware. Author: Michiel Pelt
- Fred Fish Disk 954**
- MFT** Multi-Function Tool. A little assembly program (just over 1K) that can perform all of the following DOS commands: RENAME, DELETE, MAKEDIR, WAIT, FILENOME. Useful for disks where every byte counts and you don't want a bunch of bigger utilities taking up room. Current version does not support pattern matching. Version 1.03, includes source in assembler. Author: Thorsten Stocksmeier
- SCAN8800** A specialized database program to store frequencies and station names for shortwave transmitters. It can also control a receiver for scanning frequency ranges. Version 2.38, an update to version 2.33 on disk number 864. Binary only. Author: Rainer Redweik
- Fred Fish Disk 955**
- DixGalaga** A shoot'em up game. Deluxe version of an old classic. Version 1.0, binary only, shareware. Author: Edgar M. Vigdal
- MuroloUtil** Several CLI or script based utilities. Included are: Button - A little utility that opens a requester with custom text. Useful for batch and scripts; C64Saver - A utility that reads C64 basic programs, decodes and saves them in a readable file; Calendar - A utility which prints a monthly calendar and some information about the days; CarLost - A utility that causes DTR to drop on the serial port; CDPlayer - A utility to play a musical CD on CDTV or A570; FMBadFmt - Intuition based utility which formats BAD floppies and makes them useable; KickMaker - A utility to create a new KickStart disk with the last version of kickstart on it... For A3000 owners only; SerTest - A utility that opens a window and shows the status of serial port signals Switch - A utility that opens a little centered window, that has custom text and two buttons for choice. Most programs require OS2.04+, some source included. Author: Felice Murolo
- PFS** A filesystem for the Amiga. Offers higher performance on all operations and full compatibility with AmigaDOS. Requires Kickstart 2.0 or higher. Shareware release 1.0, version 6.11. Binary only. Author: Michiel Pelt
- Fred Fish Disk 956**
- DDBase** A simple database program. Features: Up to 1500 records, up to 20 fields/record; Draw up to 10 Bevel/FlipBoxes, Box, Circles; Import/Export data as ASCII or Superbase; Uses external fields (ASCII/IFF). Installation utility provided. Version 3.00, requires OS2.x or greater. Binary only, freeware. Author: Peter Hughes
- FMsynth** A program to create sounds with FM synthesis. It has six operators, a realtime LFO and a free editable algorithm. The sound can be played on the Amiga keyboard or on a MIDI keyboard which is connected to the Amiga. The sounds can be saved in IFF-8SVX (one or five octave) or raw format. FMsynth has an AREXX port now. Included are 230 FM sounds. Version 3.3, an update to version 1.1 on disk number 895. Shareware. Author: Christian Stiens
- SetDefMon** A small utility to set the system's default monitor during WBStartup or to zap the default monitor on the fly. Possible default monitors include Pal, Ntsc, Euro36, Super72, DblNtsc and DblPal. Version 1.2, includes source in C. Author: Franz Schwarz
- Fred Fish Disk 957**
- PARex** PARex is a program which allows you to process files, mostly textfiles, whereby strings can be replaced by another, text between two strings can be stripped, strings put in lower or upper case. PARex supports normal text searching, wildcard searching, context remembering and word-only searching. Using data scripts enables the use of an unlimited number of such replace commands. Each replace command can be individually controlled. All ASCII codes can be used in the search and replace strings, even entire files, dates, times, can be inserted in such strings. Custom formatted hexadecimal output is also supported. Over twenty ready to use program scripts are included to perform simple tasks as: converting files between different computer systems, stripping comments from source files, finding strings in files, converting AmigaGuide files to normal text files,... even automatic version updating of source files. By the way, v3.00 is about two to more than twenty times faster than the previous versions, and is supplied in english, german, french, and dutch. This is version 3.00, an update to version 2.12 on disk number 859. Binary only (but the source is available), shareware. Author: Chris P. Vandierendonck
- VChess** Fully functional shareware chess game completely written in Amiga Oberon. Features: selectable screen type (can run right on the workbench screen); sizeable board; Two-human, Computer-Human and Computer-Computer play modes; Load, save games; Load/save/print movelist; Use/save openings; Time limits; Solve for mate; Selectable fonts; Setup board; Rotate board; Show movelist; Show thinking; ... and more. Requires OS2.0+, and should run even on low memory (512K) machines if the opening library is not used. Version 2.0, binary only, shareware. Author: Stefan Salewski
- Fred Fish Disk 958**
- Alert** A small command to display texts in a recovery-alert. Works on all machines with Kickstart V33 or higher. Version 1.1, includes source. Author: Ketil Hunn
- Fred-CASE** A graphical environment to design flowcharts. The source code generator generates directly compilable C source. The generated code can be compiled on other computer systems. I.E. you can generate source code for a C compiler on a UNIX operating system or a PC operating system. Version 1.0 (demo version), binary only. Author: Christian Joosen, Ron Heijmans
- TestMaker** NOT just a test creator for teachers. Ten years in developing, this one makes up tests, review sheets, quizzes, etc., in a variety of formats, and helps the teacher maintain a question database for use in most subjects. Version 3.12, binary only (Compiled HiSoft Basic), shareware. Author: Bill Lunquist, Bob Black
- Fred Fish Disk 959**
- AmigaDiary** AmigaDiary is a handy workbench tool of the type that currently abound office PC's. It is a mouse driven diary capable of storing all personal events and is the perfect solution to all those forgotten birthdays, missed appointments etc. Version 1.13, binary only. Author: Andrew K. Pearson
- HQMM** Hero Quest MapMaker. With HQMM, you can create your own missions for Hero Quest, the board game. You can place all objects that are in the Hero Quest set (doors, traps, furniture, monsters etc.) on the map and you can write your own story to go with it. All this will be printed out in the same style as the original Hero Quest missions. Version 1.11, requires OS2.0+. Binary only, freeware. Author: Camiel Rouweler
- IntuiMake** A tool for developers, created with the intention of building complex projects, with an easy to use graphics user interface. No further knowledge about conventional makes is needed, because IntuiMake does not deal with script files or things like that.

Requires OS2.0+. Version 1.2, binary only. Author: Björn E. Trost and Dirk O. Remmelt

Fred Fish Disk 960

Imperial An oriental game in which you have to remove tiles from a layout (like Shanghai or Taipei). Every game has a solution and there's a layout editor. English NTSC version and French PAL version supplied. Some other versions available from the author. Version 2.0, binary only, shareware. Author: Jean-Marc BOURSOT

Minesweeper Yet another minesweeper game. This one forgives the player, when he hits a mine, if no useful inferences could be made from the exposed information. The element of luck is sharply reduced. First version, binary only. Author: Donald Reble

PowerPlayer A very powerful, user friendly and system friendly module player. It can handle nearly all module-formats, can read powerpacked & xpk-packed modules and comes along with its own powerful cruncher that uses the liblibrary. Has a simple to use userinterface and an AREXX port, has locale-support and a nice installer script for CBM's installer utility. Version 4.0, update to version 3.9 on disk number 863. Binary only, shareware. Author: Stephan Fuhrmann

Fred Fish Disk 961

FIVE-STAR Demo version of a powerful prediction tool for LOTTO, POOLS, SWEEP, DIGIT (eg 4d) and HORSE (races) systems available worldwide. The program uses an identical framework for all five systems but they are run completely individually so that any number of them can be used simultaneously. All records, updates, predictions, bets and results are stored separately and can be saved to disk or sent to the printer at any time. This demo version is supplied with a very basic manual and is completely functional except for data input. Version 1.0, binary only. Author: Joe Taylor

MPMasterA useful MIDI program that enables to transmit/receive samples via MIDI between the Amiga and any MIDI device that supports the MIDI Sample Dump Standard format (such as the Yamaha SY85 synthesizer). It has a WorkBench interface, can play samples and all settings of the sample can be modified before transmission. Includes a circuit to build a very small MIDI interface. Distributed in two languages: English and Spanish. Requires WorkBench 2.04 or higher. Version 1.2, binary only, freeware. Author: Antonio J. Pomar Rossello

Fred Fish Disk 962

EnvTool A tool for a project icon, born out of a severe need to allow users to use their own tools for reading doc files, viewing pictures, editing files, etc. EnvTool will send the associated file to either the tool specified by an environment variable, or a selected default tool if the environment variable is not set. Version 0.1, includes source in C. Author: Dan Fish

EZAsm Combines 68000 assembly language with parts of C. Produces highly optimized code. Uses C-like function calls (supports all 3.0 functions), taglists, braces, "else", "if" support, and much more. Comes bundled with A68k and Blink, for a complete programming environment. This is version 1.8, an

update to version 1.7 on disk 699. Includes example source and executable files. Binary only. Author: Joe Siebenmann

MuchMore Another program like "more", "less", "pg", etc. This one uses its own screen or a public screen to show the text using a slow scroll. Includes built-in help, commands to search for text, and commands to print the text. Supports 4 color text in bold, italic, underlined, or inverse fonts. Can load xpk crunched files. Has a display mode requester. Is localized with German, Italian, French, and Swedish catalog files. Supports pipes. Requires KickStart 2.04 or later. This is version 4.2, an update to version 3.6 on disk number 935. Includes source in Oberon-2. Author: Fridtjof Siebert, Christian Stiens

ToolAlias Provides a mechanism for rerouting specific programs to other programs. For example, with ToolAlias, you could reroute all references to "c:\muchmore" to use "sys:utilities\ppmore" instead, so that when browsing documents on a Fish disk, you get to use your favourite text viewer, rather than loading the one specified in the document's ToolTypes. Requires OS2.0+. Version 1.02, includes source. Author: Martin W. Scott

Touch Another Amiga version of the Unix utility with the same name. Touch changes the date and time stamp of all specified files to the current date and time. This version will also create an empty file (like the Unix version) if the specified file does not exist. Version 1.2, an update to version 1.0 on disk 919. Public domain, includes source. Author: Kai Iske

Fred Fish Disk 963

BootPic BootPic shows nearly any IFF picture that you like while your system is initialized after a reset. Additionally, it may play a MED-Module. Requires OS 2.0 or higher. Version 3.1, a major update to version 2.1b on disk number 718. Binary only. Author: Andreas Ackermann

Codecracker Another MasterMind clone. Difficulty level may be set by selecting the number of color columns and the number of different colors to choose from. Documentation contained within the program. Version 2.23, binary only. Author: Michael Reineke

SIOD An interpreter for the algorithmic language Scheme, a dialect of LISP developed at MIT. Sioid is a C implementation that covers a large part of the standard and can be run with a small amount of memory (also runs on old A500 NOT expanded). It is the ideal tool to learn the language or for experimenting with functional languages. Version 2.6, includes source and examples. Based on the original code from Paradigm Inc. An update to version 2.4 on disk number 525. Author: Scaglione Ermano

Split! A high-speed file splitter. Splits a large file into several smaller files (size is user-definable). Due to the use of a 32k buffer, Split! is up to 14 times faster than the competition. CLI interface. Originally created for transporting large documents. Version 1.0, binary only. Author: Dan Fraser

Fred Fish Disk 964

Angie ANother Great Intuition Enhancer commodity that can be used to assign AngieSequences

that can consist of dozens of Intuition related actions, arbitrary dos commands and input event data to an unlimited number of hotkeys. Furthermore, these AngieSequences can be executed via AREXX. Angie's capabilities include auto window hunting, auto ActiveWinTask priority increment, 'TWA' window remembering, auto DefPubScreen definition, etc. Angie comes with a comfortable Intuition user interface and is completely localized. Includes English and German documentation and German catalog. Version 3.6, an update to version 1.6 on disk number 938. Binary only, giftware. Author: Franz Schwarz

NewDate A replacement for the AmigaDOS command 'Date'. Besides the usual date options, NewDate enables date output in your own defined format. NewDate currently supports 18 languages: English, German, French, Dutch, Italian, Spanish, Portuguese, Danish, Finnish, Swedish, Norwegian, Icelandic, Polish, Hungarian, Czech, Romanian, Turkish and Indonesian. Version 1.20, an update to version 1.10 on disk number 859. Binary only, freeware. Author: Chris Vandierendonck

RIVER This program searches an embedded version ID in a file. Like the 'Version' command you can check the version and revision number of a file. You can also add this embedded version ID as a filenote, or print it in a table where each field of the ID is clearly stated. You can also construct your own version comment using embedded version ID fields. Version 2.30, an update to version 2.00 on disk number 787. Binary only, freeware. Author: Chris P. Vandierendonck

Stocks Demo version of a stocks analysis program. Provides powerful technical analysis using numerous studies including Candlesticks, traditional bar charts, 3 moving averages, MACD, Stochastics, Gann, TrendLines, %R, Average Volume and more. It generates buy/sell signals based on customizable trading rules and graphs daily, weekly, and monthly charts using a simple ASCII data file format compatible with CompuServe historical data. Displays on Workbench or Custom Public Screen. Includes on-line AmigaGuide help text. Requires OS2.0+. Version 3.02a, binary only. Author: James Philipou, Bug-Free Development

Fred Fish Disk 965

CDPlay A small CD Player designed for the Xetec CDx Software. The program uses a small window that opens on the Workbench screen. Smaller with many more functions than those on the player that is supplied with the Xetec Software. Version 2.01, binary only. Author: Nic Wilson

UChess A powerful version of the program GnuChess version 4 for the Amiga. Plays a very strong game of chess. Code has been rewritten and data structures reorganized for optimal efficiency on 32 bit 68020 and better Amiga systems. Fully multitasking, automatically detects and supports 640X480X256 color AGA mode machines, and does not at any time BUSY wait. Requires a 68020/030/040 based Amiga computer system with AmigaOS 2.04 or later and 4 Meg of ram minimum. Special "L" version optimized for 68040 and

requires 10 Meg of ram minimum. Supports a variety of standard features such as load, save, edit board, autoplay, swap sides, force move, undo, time limits, hints, show thinking, and a supervisor mode that will allow two humans to play with the computer acting as a "supervisor". Version 2.69. Source for this version may be found on AmigaLibDisk966. Author: FSF, Amiga Port by Roger Uzun

Fred Fish Disk 966

CDTV-Player A utility for all those people, who'd like to play Audio CD's while multitasking on WorkBench. It's an emulation of CDTV's remote control, but is a little more sophisticated. Allows access to the archive even without a CDROM drive (i.e. AMIGA 500-4000), although you can't play a CD. Program and KARAOKE (live on-screen) included. Recognizes CDs automatically. Works on all CDTV's, AMIGA CD 32 and all CD ROM emulating the cdtv.device or cd.device. Version 2.31, an update to version 2.05 on disk 894. Freeware, binary only. Author: Daniel Amor

FHSspreadA Spreadsheet program that uses its own custom screen. Can be switched between hires, laced and PAL, NTSC. Should work on any amiga with at least 1MB. Version 2.01, an update to version 1.71 on disk number 887. Binary only. Author: Frank Hartog

UChessSrc Lha archive of all the sources necessary to build UChess version 2.69 as contained on disk number 965. Author: FSF, Amiga Port by Roger Uzun

Fred Fish Disk 967

IconTrace Use this program to find out which tooltypes a program supports and which icons it looks for. KickStart 2.0 or higher required. This is version 2.02, binary only. Author: Peter Stuer

MUI_usr An object oriented system to create and maintain graphical user interfaces. From a programmer's point of view, using MUI saves a lot of time and makes life much easier. Thinking about complicated terms like window resizing or font sensitivity is simply not necessary. On the other hand, users of MUI based applications have the ability to customize nearly every pixel of a program's interface according to their personal taste. Version 1.4, this is part 1 of a 2 part distribution and contains the user system. The developers support package can be found on disk number 968. Shareware. Author: Stefan Stuntz

Fred Fish Disk 968

DiskInfo A replacement for the AmigaDOS 'Info' command, but can additionally give more extensive information on the disk (volume) and/or on the device in which the disk is inserted. Version 2.00, an update to version 1.00 on disk number 783. Binary only, freeware. Author: Chris P. Vandierendonck

JustLook A collection of routines for controlling the mouse and keyboard thru generation of 'Input Events'. Implemented as object code to be linked with your programs. This is for application writers who like to include HowToDo programs with their applications. Users can actually see how to do things, rather than describing them in document files. This is not a recorder, mouse and keyboard events are generated in real time and so the software adapts itself to changes at a particular execution. Includes

- example programs and source in C and assembly. Author: Kamran Karimi
- MUI_dev** An object oriented system to create and maintain graphical user interfaces. From a programmer's point of view, using MUI saves a lot of time and makes life much easier. Thinking about complicated terms like window resizing or font sensitivity is simply not necessary. On the other hand, users of MUI based applications have the ability to customize nearly every pixel of a program's interface according to their personal taste. Version 1.4, this is part 2 of a 2 part distribution and contains the developer support package. The user system can be found on disk number 967. Shareware. Author: Stefan Stuntz
- PowerSnap** A utility that allows you to use the mouse to mark characters anywhere on the screen, and then paste them somewhere else, such as in another CLI or in a string gadget. Checks what font is used in the window you snap from and will look for the position of the characters automatically. Recognizes all non-proportional fonts of up to 24 pixels wide and of any height. Works with AmigaDOS 2.0 in both shell and WorkBench environments. This is version 2.2, an update to version 2.1b on disk 781. Binary only. Author: Nico Francois
- Fred Fish Disk 969**
- ACE** ACE is a FreeWare Amiga BASIC compiler which, in conjunction with A68K and Blink, produces standalone executables. The language defines a large subset of AmigaBASIC but also has many features not found in the latter. A simple graphical front-end (Integrated Development Environment) is also provided. This is written in ACE. Version 2.0, freeware, binary only. Author: David Benn
- DOSTrace** SnoopDOS clone with a lot more whistles and bells: session history, commodity, and can trace a lot more functions than SnoopDOS. KickStart 2.04 or higher required. This is version 2.13, binary only. Author: Peter Stuer
- LazyBench** A little utility for lazy people with a hard disk crammed full of goodies which are too difficult to reach because they are buried away in drawers inside drawers inside drawers inside drawers... LazyBench installs itself as a commodity, adds an item under the Workbench "Tools" menu and waits in the background. Use its hot key combination to pop up its window and select an item from the list displayed, thus launching your favourite application without messing around with windows and drawers. Font sensitive, Style Guide compliant and fully configurable. Requires AmigaDOS 2.xx or later. Version 1.14, an update to version 1.12 on disk 935. Binary only. Author: Werther 'Mirco' Pirani
- SysInfo** A brand new release of this popular program. It reports interesting information about the configuration of your Amiga, including some speed comparisons with other configurations, versions of the OS software, and much more. Version 3.23, an update to version 3.18 on disk number 860. Binary only. Author: Nic Wilson
- Fred Fish Disk 970**
- ADM** A comfortable and flexible address database with font sensitive windows, commodity support, application window support, an ARexx-port, public screen support, and totally controllable from the keyboard. It includes user flags (grouping), email support, and freely configurable label printing. It can fill out letter forms and call your word processor, print remittance orders, dial numbers, and has online help. Requires AmigaDOS version 2.04 or later. Version 1.20, an update to version 1.01 on disk 847. German version only. Shareware, binary only. Author: Jan Geissler
- NonTSC** Converts NTSC-Screens to PAL-Screens. It links into the OpenScreen-Routine and looks at the height of every screen opened. If it has NTSC-Height (200 Pixels), it is converted to PAL-Height (256 Pixel). Author: Thorsten Stocksmeier
- UUCode** Optimized uuencode/uudecode programs. Designed to be reliable and fast. Also includes 68030 based versions. V36.6, includes source. Author: Ralph Seichter
- Fred Fish Disk 971**
- DiskInfo** A replacement for the AmigaDOS 'Info' command, but can additionally give more extensive information on the disk (volume) and/or on the device in which the disk is inserted. Version 2.00, an update to version 1.00 on disk number 783. Binary only, freeware. Author: Chris P. Vandierendonck
- QDisk** A WorkBench utility that will monitor the space usage of any mounted AMIGA DOS volume, like your hard drive or your floppy drive. QDisk will also notify you if a volume becomes too full. Comes with a preference editor to customize QDisk to your needs. Version 2.01, an update to version 1.1 on disk 903. Freeware, binary only. Author: Norman Baccari
- Yak** Yet Another Kommodoty. Features a sunmouse that only activates when the mouse stops, KeyActivate windows, click windows to front or back, cycle screens with mouse, mouse and screen blanking, close/zip/shrink/enlarge windows with programmable hotkeys and a lot of other configurable hotkeys. Fully localized English language builtin and provided catalogs for Dutch, French, German, Italian and Swedish. Documentation in English, French, German and Italian. Includes installer scripts and C source. Version 1.57, an update to version 1.52 on disk number 912. Author: Gaël Marziou & Martin W. Scott
- Fred Fish Disk 972**
- Icons** A bunch of 4-Color Icons from which you may find something suitable for your particular WorkBench environment. Author: Magnus Enarsson
- IntelInsideA** A cute little play on the marketing motto of that "other" family of microprocessors...a WorkBench TrashCan Icon. Author: Unknown... (Unconfessed??)
- MoreIcons** Another bunch of Icons (8-Color this time) from which you may find something suitable for your particular WorkBench environment. Author: Dan Elgaard
- QuickFile** QuickFile is a flexible, easy to use flat file database. Files can be larger than available ram, but as much of the file as possible is kept in ram for fast access. Features include: multiple indexes that are automatically maintained; character, date, integer and floating point data types; up to 250 characters per field and 250 fields per record; form and list style displays and reports; unlimited number of views for each file; fast sorting with multiple sort keys; improved search function; fields can be added, changed, or deleted at any time; flexible ascii export/import; flexible multi-column label printing. Runs on WB1.3 or later and should be OK with 512K ram. Version 2.02, an update to version 1.3.3 on Disk 919. Shareware, binary only. Author: Alan Wigginton
- RCON** A replacement for the CON:-Handler of Amiga-OS 2.x / 3.x. Has many new features including scrolling back text which has disappeared, enhanced copy & paste support, window iconification, output logging, print window contents, and much more. This is a demo distribution of a shareware product. Version 1.4, an update to version 1.0 on disk 930. Binary only. Author: Gerhard Radatz
- Fred Fish Disk 973**
- TextPlus** A TeX frontend word processor. TPP provides facilities for tables, lists, mailmerge, footnotes, inclusion of iff-graphics, an ARexx-Port (122 commands), printing via the printer.device (no TeX needed for this), and full OS2.xx/3.xx compatibility. Makes use of PasTeX, Georg Hessmann's Amiga implementation of TeX, or AmigaTeX of Radical Eye Software, which is supported from now on. New features: user definable menus, keymap, and macros; completely localized (available languages: english, deutsch); clipboard support; AppWindow, AppIcon; 11 new ARexx commands. This is version 5.01, an update to version 4.10 on disk 845/846. Shareware, binary only. Author: Martin Steppeler
- Fred Fish Disk 974**
- DDLI** The Duniho and Duniho Life Pattern Indicator (DDLI) is a program that asks you questions in order to determine your Life Pattern. The Life Patterns correspond to the sixteen psychological types measured by the Myers-Briggs Type Indicator (MBTI), and they are represented by the same abbreviations. By using knowledge that Terence Duniho has added to the study of Type, this program also checks itself by asking supplementary questions about other preferences that correlate with a person's type. Author: Fergus Duniho
- KingCON** A console-handler that optionally replaces the standard 'CON:' and 'RAW:' devices. It is 100% compatible, but adds some VERY useful features, such as: Filename-completion (TAB-expansion); A review-buffer; Intuition menus; Jump scroll (FAAST output!); Cursor-positioning using the mouse; MC68020-optimized version; And more... Version 1.1, requires OS2.x, binary only. Author: David Larsson
- MathPlot** A function plotter with lin/log plot, a complete KS 2.0 interface, and ARexx support. Needs Kickstart/WorkBench 2.0 and mtool.library (included). Version 2.20, an update to version 2.07 on disk number 916. This is a Demo version with some options disabled, requires a key file for full functionality. Shareware, source available from author. Author: Rüdiger Dreier
- Fred Fish Disk 975**
- CLIEExchange** A 592 byte CLI replacement for the standard CBM Exchange utility. The only difference is that Exchange has a graphical user interface while CLIEExchange has been designed to be called from CLI so it can be used within scripts, menus, docks or hotkeys. You need at least 2.04 system release. C source included. Author: Gaël Marziou
- DieserZug** A nicely done WorkBench "Worms" type game, where the object is to gobble up pieces making yourself longer and longer, while avoiding running into the walls or your "tail". Features 3 different speeds, high score list, pause and help keys. Version 1.2a, binary only. Author: Juha Vehviläinen
- ITF** Amiga port of ITF4.01. ITF stands for "Infocom Task Force". There have been several ports of Infocom interpreters to the Amiga, but none of this program. The interpreter supports v1, v2, v3 (Zork1 to Stationfall), v4 (Trinity, Bureaucracy, etc.) and v5 (Sherlock, Beyond Zork etc.) games. This is more than any other freely distributable interpreter. With this interpreter you can play ALL the games in the LTOI2 package for the IBM PC, by copying the datafiles with CrossDOS or similar, then just running this interpreter. Requires OS 2.0+. Binary only. Author: InfoTaskForce, amiga port by David Kinder
- PCal** Creates a very nice looking postscript calendar. By default, PCal simply prints an empty calendar. Its real power is in its ability to place "events" in appropriate days on the calendar, thus allowing the user to create personalized calendars. This is achieved through the use of a "calendar.dat" file that has extraordinary flexibility. Author: Patrick Wood, Joe Brownlee, Andy Fyfe, et al.
- To Be Continued.....
- In Conclusion**
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•AC•

And furthermore...

4000 Tower at Cebit

Bound for Europe, No news for North America

MARCH 1994, Hannover, Germany—Cebit is the largest computer fair presented on the European continent and it has long been the site of large, extravagant displays by Commodore to the European marketplace. AC has discovered, at press time, that Commodore will unveil the new Amiga 4000 Tower at this year's event. From a list of the proposed specifications (all specifications are subject to change), the tower configuration for the 4000 should yield an enormous amount of room for graphics, video, or other advanced uses.

The Amiga 4000 Tower resembles an advanced PC clone in a stylish case. The thirty-five pound, floor standing tower has room for three externally accessible 5.25" drive bays as well as two vertical 5.25" bays. There is an additional 5.25" vertical bay accessible internally. The 5.25" bays can also be fitted with 3.5" devices. The Tower also includes space for up to two internal 3.5", dual speed, high density, floppy drives (one drive is standard with the machine).

The 4000 Tower sports an internal SCSI-II interface. The 16-bit SCSI-II controller has support for up to seven internal or external SCSI devices and it will support SCSI-II FAST mode. Support for up to two 16-bit AT IDE units is also included.

The MC68040 (running at 25MHz) is mounted on a removable card which occupies the CPU slot (same as on the standard Amiga 4000). Five Zorro II/III (100-pin) Amiga expansion slots, four PC/AT expansion slots (in line with three Zorro slots), and two Amiga video expansion slots (in line with two Zorro slots) provide the internal expansion possibilities of the 4000T with a 240 Volt power supply for support.

Early reports say the 4000T will be shipped with 4MB of 32-bit FAST RAM and 2MB of 32-bit CHIP RAM. Like the 4000, expansion is available through four 72-pin SIMM sockets allowing a maximum of 16MB on-board FAST RAM using 4MB, 32-bit SIMMs. Additional memory is possible through the use of memory cards by third party developers using the AUTOCONFIG utility. The ROM is Kickstart V3.0 in 32-bit.

The 4000 Tower maintains the integrity of the Amiga 4000 with the AGA custom chip set. Resolutions from 320 x 256 to 1280 x 512 (more with overscan including 800 x 600) with video support for both PAL and NTSC resolutions are standard. The 4000T also demonstrates no change in the standard color palette of 16,777,216 colors with 2 to 256,000 user-definable colors displayed on the screen.

The video display output will work with RGB analog VGA or Multiscan monitors (not all modes are supported on non-multiscan monitors). As in the standard 4000, the horizontal scan rates are 15KHz to 31KHz and the vertical scan rates are 50Hz to 72Hz.



If you move the 4000 Tower logo from the smoked bezel to the white area, you will see the final design according to inside Commodore sources.

External ports on the 4000T include: Keyboard port, Parallel port, Serial port, two mouse or joystick ports, right and left RCA stereo audio outputs, a video port, a floppy drive port, and a HDB50 female SCSI-II connector. There are also no surprises in sound with four channel stereo produced on 8-bit D/A converters. Of course the 4000 Tower will ship with AmigaDOS 3.0 including CROSSDOS®—an MS DOS® file transfer utility. An internal speaker, battery backed real time clock and calendar, security lock, external MUTE switch and LED indicator, as well as a standard keyboard and mouse round out the unit's features.

Delivery

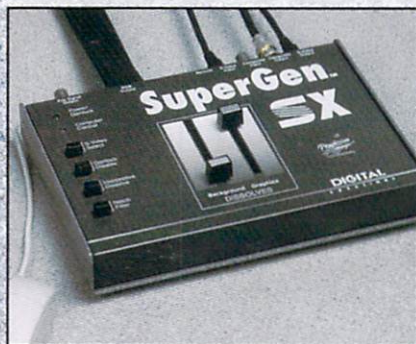
While no dates are available for the Amiga 4000 Tower's release in North America, according to Commodore European sources, the machine is due to begin shipping in Europe at the beginning of April. Even the European sources did not have a price for the product at press time.

Commodore's 4000 Tower has been anxiously awaited by high volume Amiga users to fill expansion requirements. With two internal video expansion slots and a large capacity for several hard drives (based on SCSI-II FAST mode), Amiga owners can now utilize more than two advanced video or graphics display products in the same computer without constantly reinstalling them. With such an obvious market for the Amiga 4000 Tower in the U.S.A. for Video Toaster users and others, it is surprising that Commodore has not yet announced its North American distribution date or pricing.

•AC•

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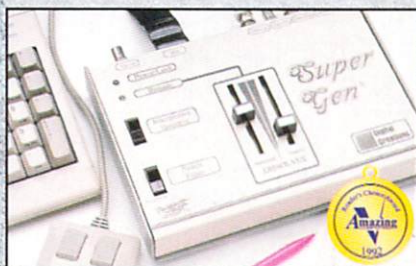


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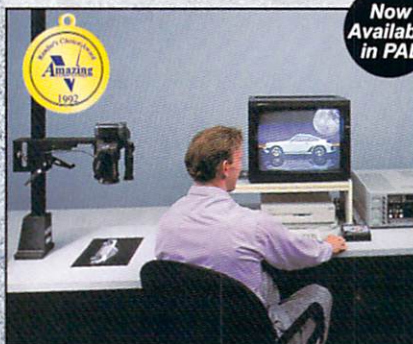
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The Reviews are in...

"The program is so fast and flexible that it makes its Amiga predecessors feel like the old Doodle! program on the Commodore 64. Nothing out there can match its feature set, and it's the one paint program I've used that's so fast that it never gets in the way of your creativity."

Amiga Computing,
October 1993 (UK)

"Brilliance is now — leaving DPaint trailing in its wake — the best art package available for the Amiga. It's very hard to express why I'm so taken by Brilliance, there's just a feeling of 'rightness' about the way that it works."

C U Amiga,
October 1993 (UK)



"For many years, DPaint ruled the roost when it came to supplying incredible graphics power at an affordable price, but no longer. Brilliance has assumed centre stage and is now the Amiga's number one art package."

C U Amiga,
January 1994 (UK)

"After using Brilliance for just a couple of days, I'm hooked. It is the only package to be released for the Amiga which can rival DeluxePaint for animation capabilities, and it is a class act."

Amiga Down Under
Nov/Dec 1993
(New Zealand)

"Excellent! Brilliance is loaded with useful drawing and animation features, but it's not just the sheer number of tools on offer that impresses. Two other big points arise. First, the program is very easy to use, thanks to its intuitive, flexible and well thought-out panel system. The second major factor is Brilliance's speed. Even in HAM-8 mode, everything zips along beautifully quickly."

Amiga Format,
October 1993 (UK)

"It took a while, but Deluxe Paint IV has finally met its match. If you're looking for the best AGA paint program on the Amiga, look no further than Brilliance."

Amazing Computing,
November 1993 (USA)

"Brilliance is user friendly, doing an excellent job with nearly every function and option that it offers..."

AmigaWorld,
December 1993 (USA)

"It is solid as a rock. Never have I known a first version of any program stand up like this or be so perfectly polished."

Amiga Shopper,
December 1993 (UK)

...Brilliance kicked Tut's Butt!

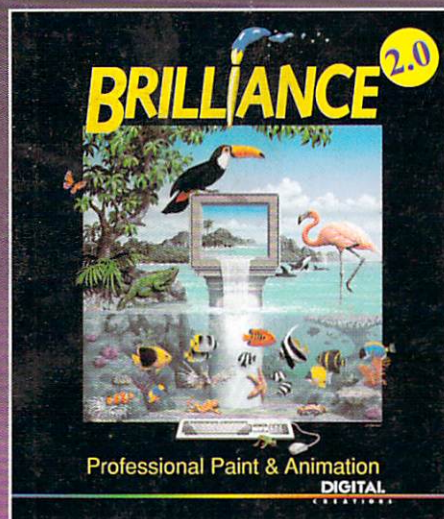


COMPARE! Deluxe Paint IV Vs. Brilliance

Overall Speed	Slow	Fast
Picture Size Limited By:		
Chip RAM	Yes	No
Total RAM	N/A	Yes
Number of Brushes		29
Number of Anim Brushes	2	9
Number of Screens	2	Lots*
Levels of Undo	1	Lots*
Levels of Redo	1	Lots*
Load/Save Paths	Yes	Yes
Flip Frames	No	Yes
Realtime Preview Mode	No	Yes
Full Screen HAM Gradient Fill	Slow	Fast
Max # of Colors Gradient Fill	16	30,000
True 24 Bit Editing	No	Yes
Load DCTV Pics as HAM	No	Yes
Max Animation Speed	30fps	99fps
Ground-up Design for AGA	No	Yes
* Limited only by total RAM		

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ANNOUNCING VERSION 2.0

Version 2.0 of Brilliance has been designed with productivity in mind. Several new features enhance this already powerful program. Features like *Flip Frames* that allows the animator to flip through drawings. *Rub Thru* that make compositing easier. *Load and Save Tween* paths enabling much longer and repeatable brush moves. Faster and more accurate *Tweening*. *True View* option for magnification. And much, much more.

Brilliance!
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